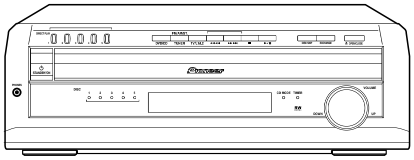
Pioneer sound.vision.soul

Service Manual


XV-HTD340

ORDER NO.
RRV2888

DVD/CD RECEIVER

XV-HTD340

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Regional restriction codes (Region No.)	Remarks
XV-HTD340	KUXJ/CA	AC120V	1	

For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
ⒸPIONEER CORPORATION 2004
T-ZZV MAR. 2004 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols ▮═╪ (fast operating fuse) and/or ▮═╳ (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible ▮═╪ (fusible de type rapide) et/ou ▮═╳ (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

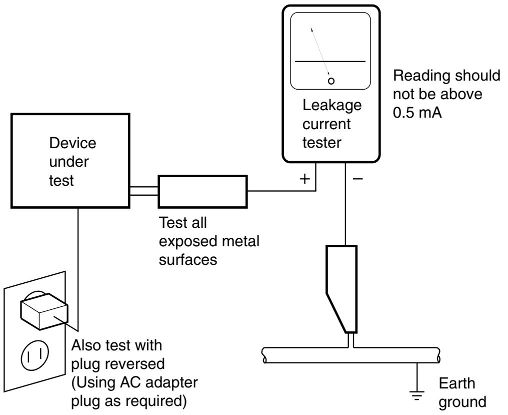
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Leakage current tester
Reading should not be above 0.5 mA
Device under test
+
−
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

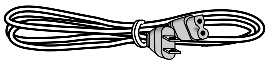
Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

CONTENTS

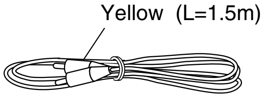
SAFETY INFORMATION........2
1. SPECIFICATIONS........5
2. EXPLODED VIEWS AND PARTS LIST........6
  2.1 PACKING........6
  2.2 EXTERIOR SECTION........8
  2.3 FRONT PANEL SECTION........10
  2.4 AMP SECTION........11
  2.5 TABLE MECHANISM SECTION........12
  2.6 TRAVERSE MECHANISM ASSY-S........14
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM........16
  3.1 BLOCK DIAGRAM........16
  3.2 OVERALL WIRING DIAGRAM........20
  3.3 DVDM ASSY(1/3)........22
  3.4 DVDM ASSY (2/3)........24
  3.5 DVDM ASSY (3/3)........26
  3.6 DSP ASSY (1/2)........28
  3.7 DSP ASSY(2/2)........30
  3.8 6CH AMP ASSY........32
  3.9 AF ASSY (1/4)........34
  3.10 AF ASSY (2/4)........36
  3.11 AF ASSY(3/4)........38
  3.12 AF(4/4), DIODE L and DIODE S ASSYS........40
  3.13 TRSB, SSRB, LOMB and SSIB ASSYS........42
  3.14 PRIMARY, AMP TRADE, DSP TRADE and VIDEO JACK ASSYS........44
  3.15 DIPLAY, FUNC KEY, DISC KEY, HP MIC and JOG ASSYS........46
  3.16 DVDM WAVEFORMS........48

4. PCB CONNECTION DIAGRAM 50
    4.1 TRSB, SSRB, LOMB and SSIB ASSYS........ 51
    4.2 DVDM ASSY 52
    4.3 DSP, DSP TRADE and AMP TRADE ASSYS 54
    4.4 6CH AMP ASSY 56
    4.5 AF ASSY........ 58
    4.6 PRIMARY and VIDEO JACK ASSYS........ 62
    4.7 DISPLAY, DIODE L, DIODE S, FUNC KEY, DISC KEY, HP MIC and JOG ASSYS........ 64
5. PCB PARTS LIST 68
6. ADJUSTMENT 74
    6.1 ADJUSTMENT ITEMS AND LOCATION 74
    6.2 JIGS AND MEASURING INSTRUMENTS........ 74
    6.3 NECESSARY ADJUSTMENT POINTS 75
    6.4 TEST MODE 76
    6.5 MECHANISM ADJUSTMENT........ 77
7. GENERAL INFORMATION........ 79
    7.1 DIAGNOSIS 79
        7.1.1 TEST MODE........ 79
        7.1.2 DISPLAY SPECIFICATION OF THE TEST MODE........ 81
        7.1.3 FUNCTIONAL SPECIFICAION OF THE SHORTCUT KEY 82
        7.1.4 SPECIFICAION OF MODEL INFORMATION DISPLAY........ 83
        7.1.5 FUNCTIONAL SPECIFICAION OF THE SERVICE MODE 84
        7.1.6 MECHANICAL ERROR HISTORY........ 85
        7.1.7 ID NUMBER AND ID DATA SETTING 90
        7.1.8 TROUBLE SHOOTING........ 93
        7.1.9 DSP TROUBLE SHOOTING 98
        7.1.10 SEQUENCE AFTER POWER ON........ 100
        7.1.11 WAVEFORM POINTS LOCATION........ 101
        7.1.12 PROTECTION CIRCUIT........ 103
        7.1.13 DISASSEMBLY........ 108
    7.2 PARTS........ 123
        7.2.1 IC 123
        7.2.2 DISPLAY........ 129
    7.3 DISC/CONTENT FORMAT 130
    7.4 CLEANING........ 131
8. PANEL FACILITIES 132

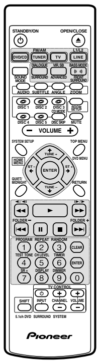
■ Accessories



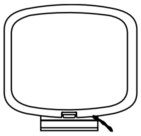
Power Cord
(ADG7021)



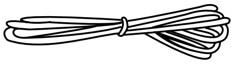
Video Cable
(XDE3046)



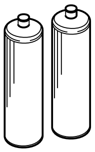
Remote control
(XXD3080)



AM loop antenna
(ATB7013)



FM wire antenna
(ADH7030)



AA size IEC R6
Dry cell batteries (x2)

1. SPECIFICATIONS

Specifications

Amplifier section

Continuous Power Output (RMS):

Front, center, surround	100 W per channel (1 kHz, 10 % T.H.D., 6 Ω)
Subwoofer	100 W (100 Hz, 10 % T.H.D., 6 Ω)

FM tuner section

Frequency range	87.5 – 108 MHz
Antenna	75 Ω, unbalanced

AM tuner section

Frequency range

With 9 kHz step	531 kHz to 1,602 kHz
With 10 kHz step	530 kHz to 1,700 kHz
Antenna	Loop antenna

Miscellaneous

Power requirements	AC 120 V, 60 Hz
Power consumption	180 W
Power consumption in standby	0.5 W
Dimensions	420 (W) x 126 (H) x 445 (D) mm/ 16 $^{9}/_{16}$ (W) x 4$^{15}/_{16}$ (H) x 17$^{1}/_{2}$ (D) in.
Weight	9.8 kg / 21 lb. 10 oz

Accessories (DVD/CD receiver)

Remote control	1
AA/R6P dry cell batteries	2
Video cable (yellow plugs)	1
AM loop antenna	1
FM antenna	1
Power cord	1
These operating instructions	1
Warranty Card	1

Speaker System (S-HTD340)

(Front speakers x2, surround speakers x2, center speaker x1, subwoofer x1)

Front speakers

Enclosure	Closed-box bookshelf type (magnetically shielded)
System	2-way system
Speakers	
Woofer	10 cm cone type
Tweeter	3.2 cm semi-dome type
Nominal impedance	6 Ω
Frequency range	60 Hz to 20 kHz
Maximum Input Power	100 W
Dimensions	155 (W) x 360 (H) x 177 (D) mm/ 6 $^{1}/_{8}$ (W) x 14$^{3}/_{16}$ (H) x 6$^{15}/_{16}$ (D) in.
Weight	2.4 kg / 5 lb 5 oz

Center speaker

Enclosure	Closed-box bookshelf type (magnetically shielded)
System	8.7 cm 1-way system
Speakers	8.7 cm cone type
Nominal impedance	6 Ω
Frequency range	65 Hz to 20 kHz
Maximum Input Power	100 W
Dimensions	350 (W) x 116 (H) x 98 (D) mm/ 13 $^{3}/_{4}$ (W) x 4$^{9}/_{16}$ (H) x 3$^{7}/_{8}$ (D) in.
Weight	1.6 kg / 3 lb 8 oz

Surround speakers

Enclosure	Closed-box bookshelf type (magnetically shielded)
System	8.7 cm 1-way system
Speakers	8.7 cm cone type
Nominal impedance	6 Ω
Frequency range	85 Hz to 20 kHz
Maximum Input Power	100 W
Dimensions	155 (W) x 116 (H) x 98 (D) mm/ 6 $^{1}/_{8}$ (W) x 4$^{9}/_{16}$ (H) x 3$^{7}/_{8}$ (D) in.
Weight	1 kg / 2 lb 3 oz

Subwoofer

Enclosure	Bass-reflex floor type
System	16 cm 1-way system
Speaker	16 cm cone type
Nominal impedance	6 Ω
Frequency range	35 Hz to 2 kHz
Maximum Input Power	100 W
Dimensions	190 (W) x 360 (H) x 327 (D) mm/ 7 $^{1}/_{2}$ (W) x 14$^{3}/_{16}$ (H) x 12$^{7}/_{8}$ (D) in.
Weight	5.0 kg / 11 lb 0 oz

Accessories (Speaker system)

Speaker cables	6
Non-skid pads	1 sheet

Note

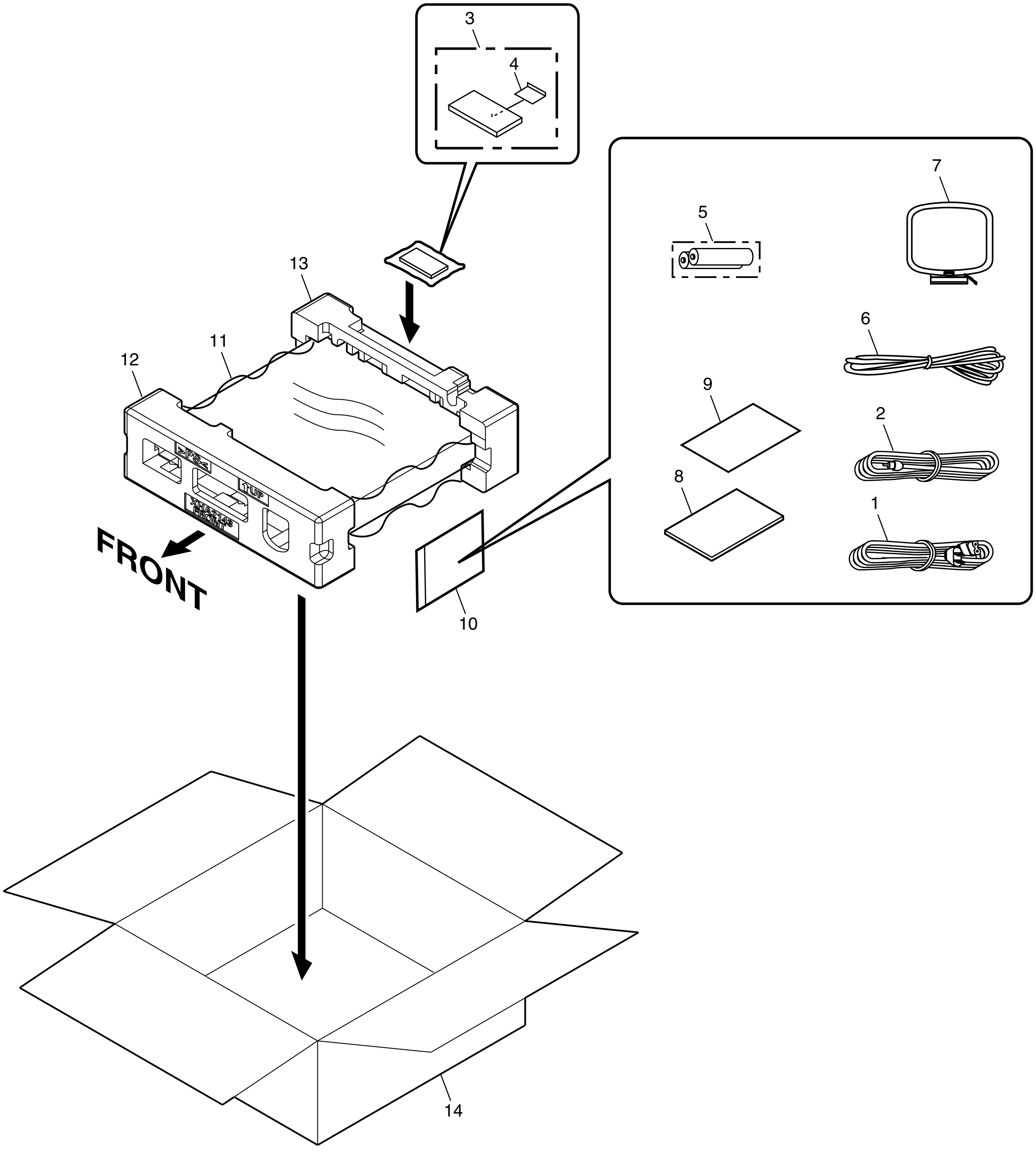
- This product includes FontAvenue® fonts licensed by NEC corporation. FontAvenue is a registered trademark of NEC Corporation.
- Specifications and design subject to possible modification without notice, due to improvements.

Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories. "DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

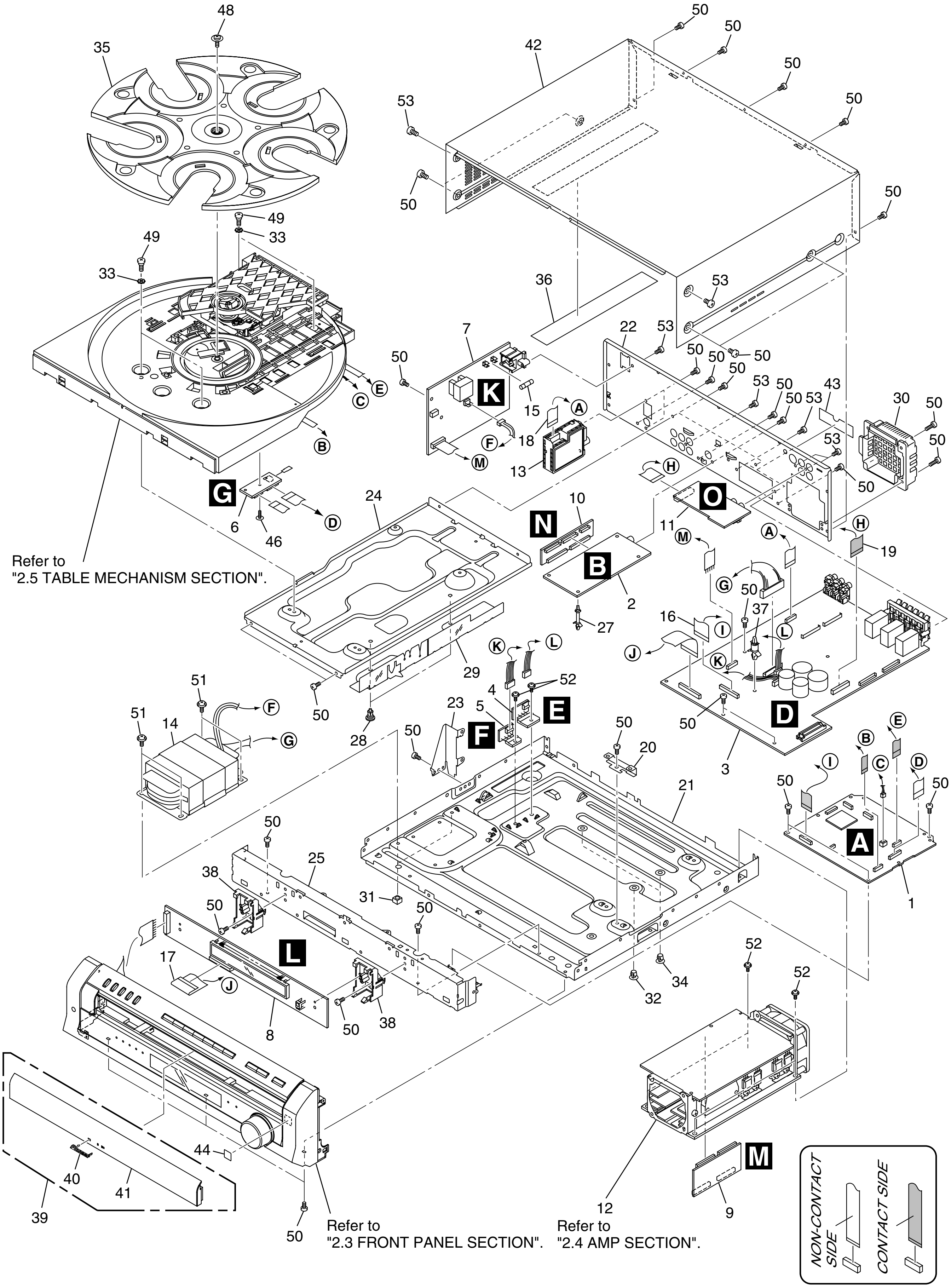
2.1 PACKING



PACKING parts List

Mark	No.	Description	Part No.
⚠	1	Power Cord	ADG7021
	2	Video Cord (L = 1.5m)	XDE3046
	3	Remote Control Unit	XXD3080
	4	Battery Cover	AZN7933
NSP	5	Dry Cell Battery (R6P/AA)	VEM1031
	6	FM Antenna	ADH7030
	7	AM Loop Antenna	ATB7013
	8	Operating Instructions (English)	XRB3031
NSP	9	Warranty Card	ARY7045
NSP	10	Polyethylene Bag (0.03 x 230 x 340)	Z21-038
	11	Packing Sheet	AHG7010
	12	Front Pad	XHA3143
	13	Rear Pad	XHA3144
	14	Packing Case	XHD3411

2.2 EXTERIOR SECTION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NON-CONTACT SIDE
CONTACT SIDE

Refer to "2.5 TABLE MECHANISM SECTION".

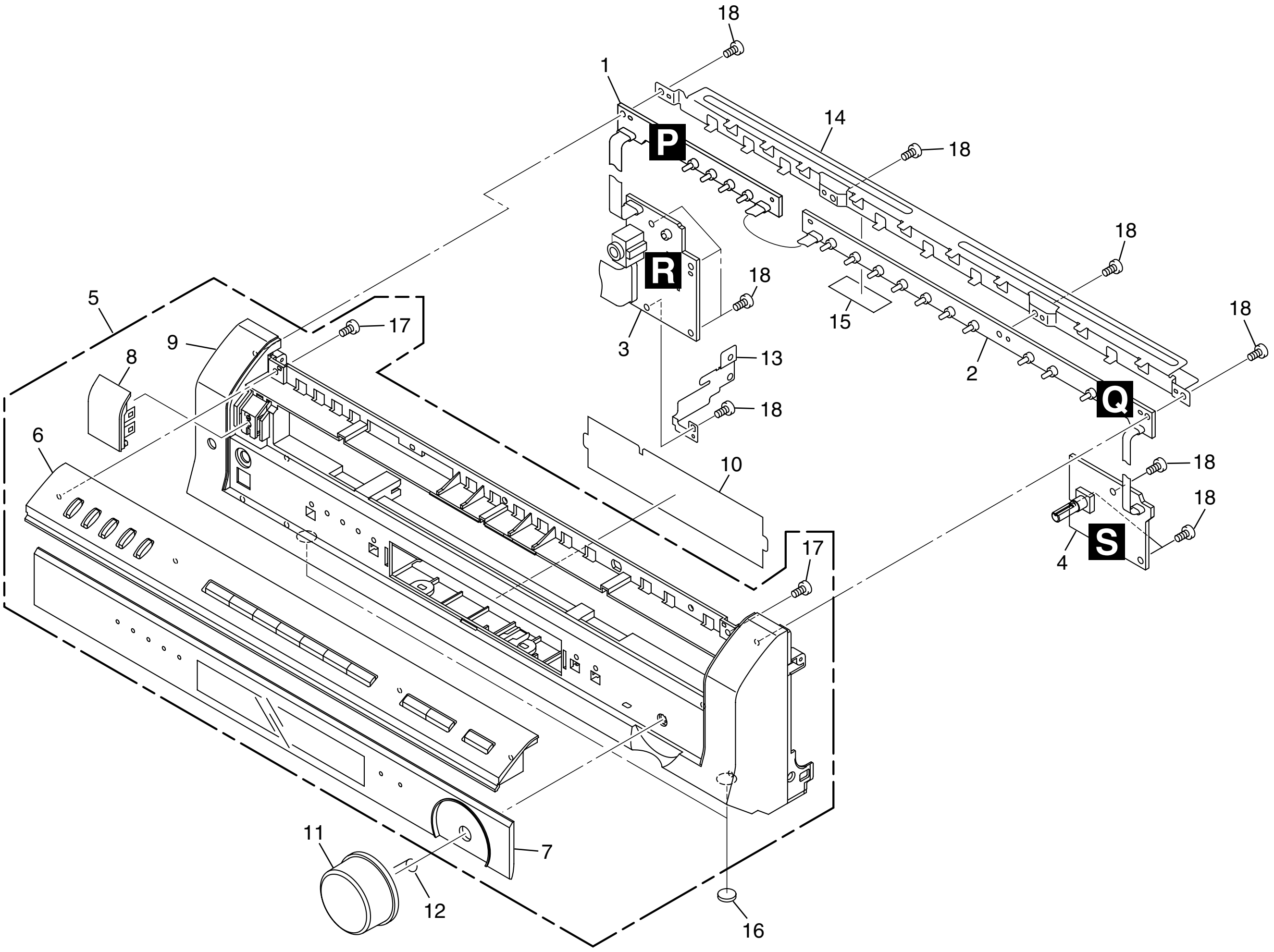
Refer to "2.3 FRONT PANEL SECTION".

Refer to "2.4 AMP SECTION".

EXTERIOR SECTION parts List

Mark	No.	Description	Part No.
	1	DVDM Assy	AWM7881
	2	DSP Assy	AWX8523
	3	AF Assy	XWZ3835
	4	DIODE L Assy	XWZ3840
	5	DIODE S Assy	XWZ3842
	6	SSIB Assy	XWZ3843
	7	PRIMARY Assy	XWZ3844
	8	DISPLAY Assy	XWZ3846
	9	AMP TRADE Assy	XWZ3847
	10	DSP TRADE Assy	XWZ3848
	11	VIDEO JACK Assy	XWZ3849
NSP	12	AMP Module 6CH	AXQ7254
	13	FM / AM TUNER Unit	AXX7172
⚠	14	Power Transformer (T1)	ATS7354
⚠	15	Fuse (FU1 : 6.3A/125V)	REK1069
	16	18P Flexible Cable	ADD7409
	17	27P Flexible Cable	ADD7412
	18	11P Flexible Cable	XDD3152
	19	21P Flexible Cable	XDD3153
	20	DVD Angle HTM	ANG7457
NSP	21	Chassis	XNA3020
	22	Rear Panel	XNC3263
	23	PCB Angle	XNG3057
	24	Mecha. Frame	XNG3121
	25	Front Frame	XNG3122
	26	• • • • •	
NSP	27	PCB Spacer	AEC1446
	28	Push Rivet	AEC7370
	29	Barrier A HTM	AEC7469
	30	Fan Cover HTM	AMR7451
	31	Disc Guard	PNM1245
NSP	32	PCB Holder	PNW1706
	33	Mech. Spacer (T1.5)	VEB1339
NSP	34	PC Support	VEC1749
	35	Rotary Tray	VNK5558
	36	Bonnet Cushion	XEB3027
NSP	37	PCB Support	XEC3020
	38	PCB Holder	XMR3087
NSP	39	Tray Cap Assy	XXG3173
	40	Pioneer Name Plate	VAM1129
	41	Tray Cap	XAK3459
	42	Bonnet HTM	AZN7932
	43	Speaker Label HTM	AAX7976
NSP	44	Energy Star Label	AAX8022
	45	• • • • •	
	46	Screw	VBA1094
	47	• • • • •	
	48	Screw	ABA7112
	49	Step Screw C	ABA7113
	50	Screw	BBZ30P060FTC
	51	Screw	BBZ40P060FTC
	52	Screw	IBZ30P080FTC
	53	Screw	VPZ30P100FTC

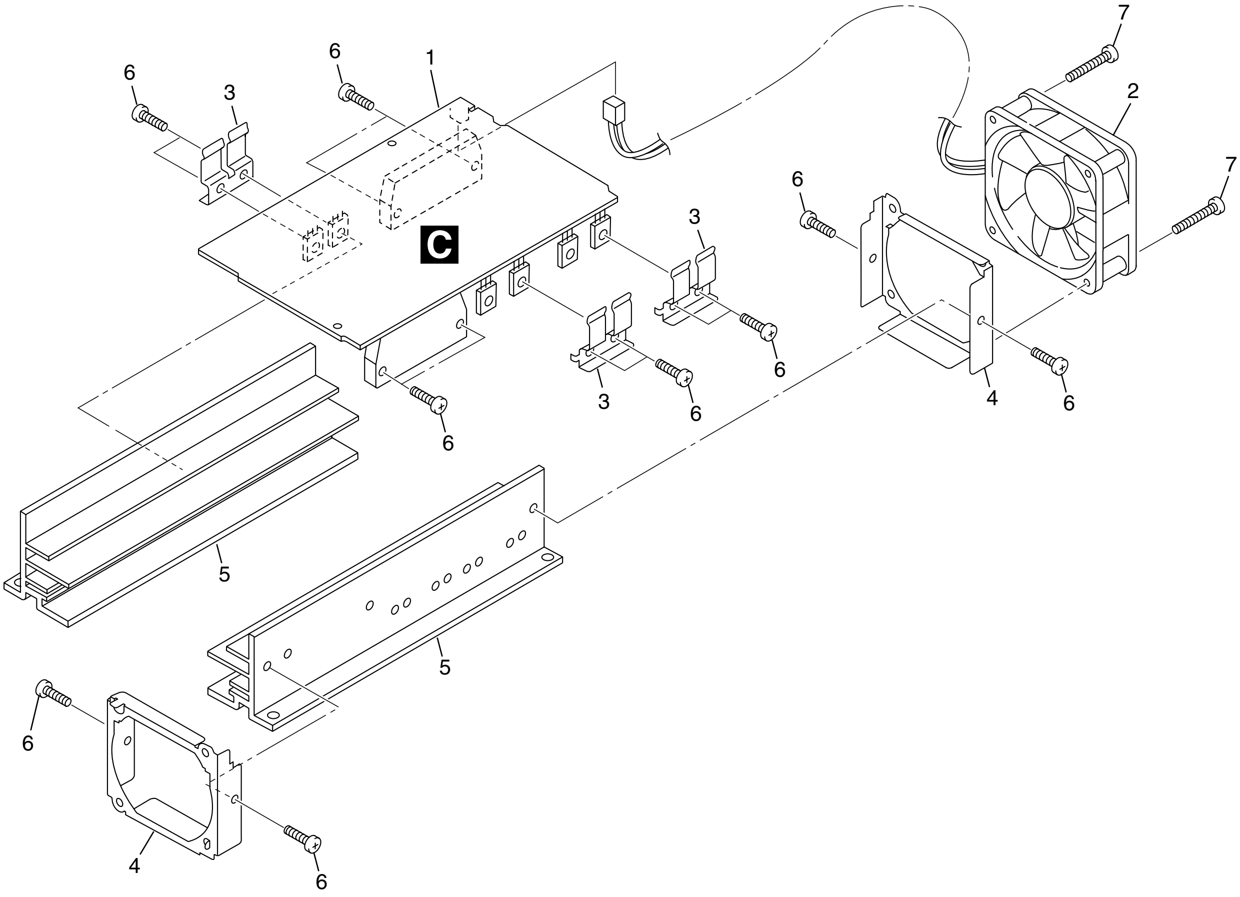
2.3 FRONT PANEL SECTION



FRONT PANEL SECTION parts List

Mark	No.	Description	Part No.
	1	FUNCTION KEY Assy	XWZ3850
	2	DISC KEY Assy	XWZ3851
	3	HP MIC Assy	XWZ3852
	4	JOG Assy	XWZ3854
NSP	5	Front Panel Assy	XXG3175
	6	Top Panel Assy	XZN3146
	7	Display Window	XAK3448
	8	Power Cap	XAK3460
	9	Front Panel	XMB3150
	10	FL Filter HTM	AAK8100
	11	VOL Knob	XAA3027
	12	VOL Ring	ABH7230
	13	GND Plate L	XNG3123
	14	Top Frame	XNG3124
	15	Sensor Cushion	XEB3040
	16	Leg	AEB7090
	17	Screw	BPZ30P080FTC
	18	Screw	VPZ30P100FTC

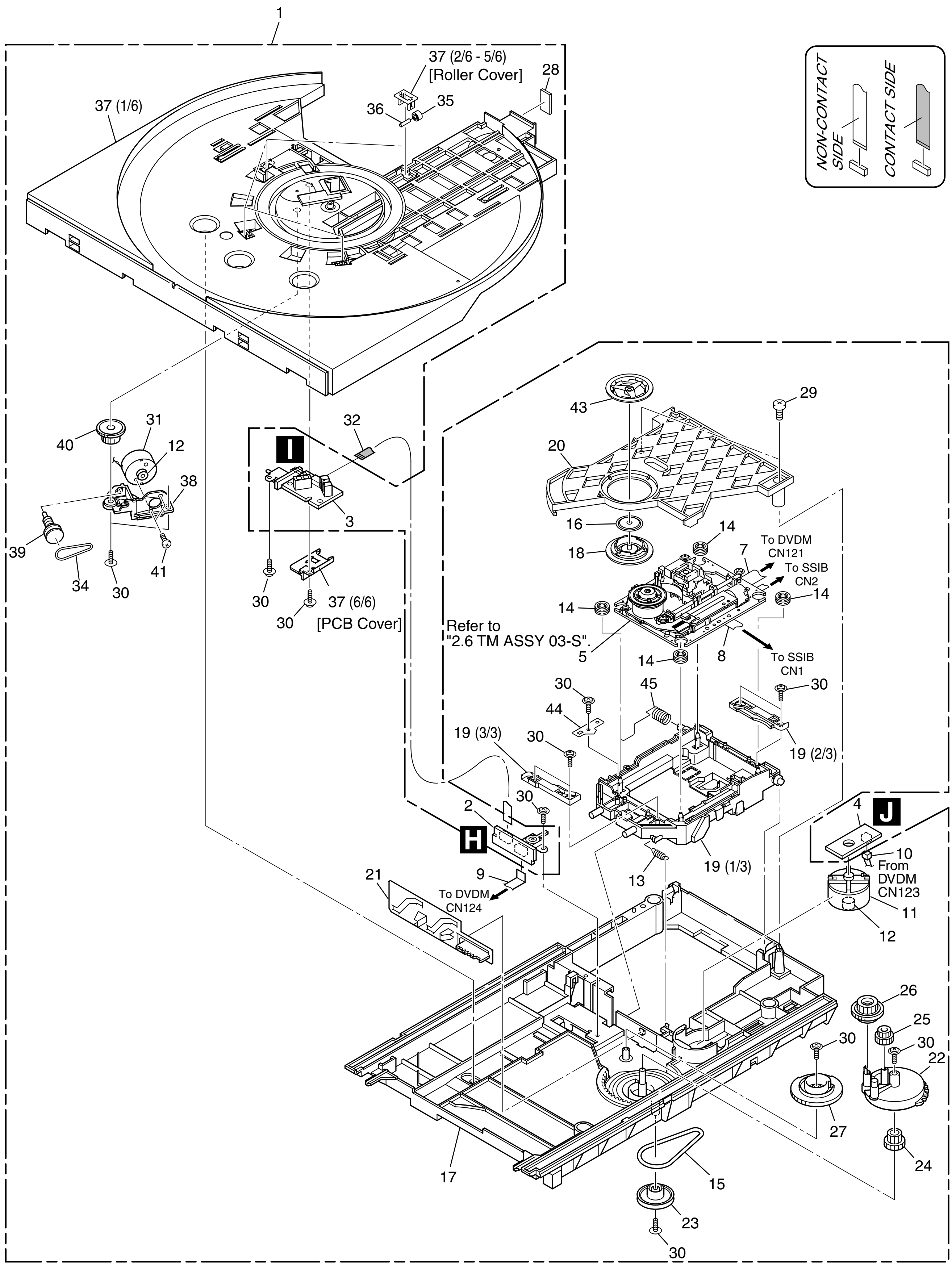
2.4 AMP SECTION



AMP SECTION parts List

Mark	No.	Description	Part No.
	1	6CH AMP Assy (for service)	AZW7283
	2	DC Fan Motor	AXM7025
	3	FET Bracket A	ANG7418
	4	Fan Plate	ANG7462
NSP	5	Heatsink	ANH7166
	6	Screw	BBZ30P140FTC
	7	Screw	BBZ30P300FTC

2.5 TABLE MECHANISM SECTION


1
37 (1/6)
37 (2/6 - 5/6)
[Roller Cover]
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NON-CONTACT SIDE
CONTACT SIDE
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30
41
32
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3
30
37 (6/6)
[PCB Cover]
Refer to
"2.6 TM ASSY 03-S".
16
18
14
7
To DVDM CN121
To SSIB CN2
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To SSIB CN1
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44
19 (3/3)
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19 (2/3)
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H
9
To DVDM CN124
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13
19 (1/3)
4
J
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From DVDM CN123
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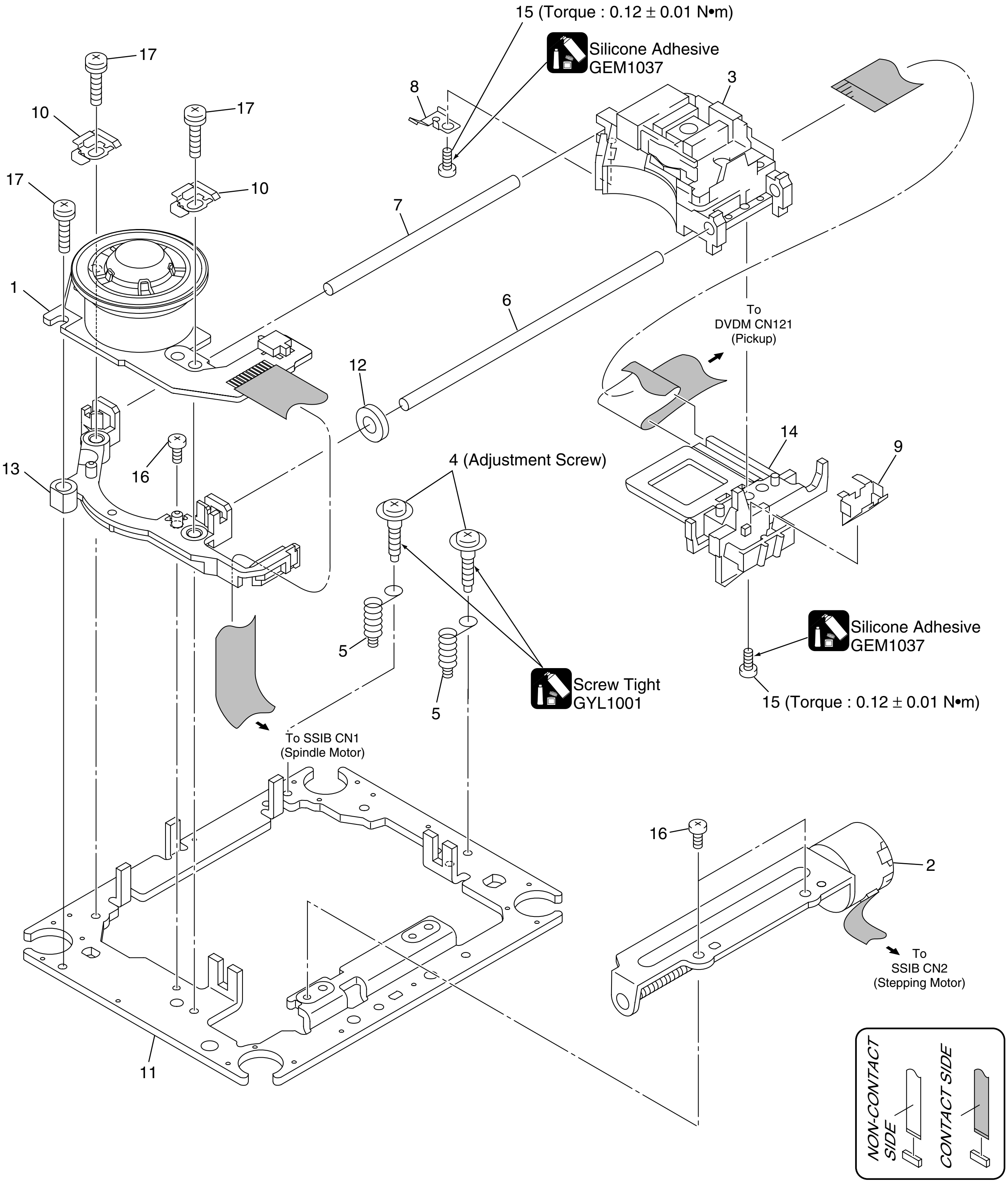
30

TABLE MECHANISM SECTION parts List

Mark	No.	Description	Part No.
NSP	1	5C MECH Assy	AXA7134
	2	TRSB Assy	XWZ3855
	3	SSRB Assy	XWZ3856
	4	LOMB Assy	XWZ3857
	5	TM Assy 03-S	VXX2909
	6	• • • • •	
	7	Flexible Cable 24P	ADD7418
	8	Flexible Cable 17P	ADD7419
	9	Flexible Cable 8P	ADD7420
	10	Housing Assy 2P	VKP2249
	11	Slider Motor (LOADING)	VXM1033
	12	Motor Pulley	PNW3026
	13	Spring	VBH1333
	14	Floating Rubber	VEB1351
	15	Load Belt	VEB1316
	16	Clamper Plate 04	VNE2342
	17	Mech. Base	VNK5556
	18	Clamper	VNL1935
	19	Float Base	VNL1933
	20	Clamper Holder	VNL1939
	21	Clamp Cam	VNL1934
	22	Planet Base	ANW7258
	23	Gear Pulley	ANW7261
	24	Loading Gear (1)	ANW7262
	25	Loading Gear (2)	ANW7263
	26	Drive Gear	ANW7264
	27	Change Gear	ANW7260
	28	CR cushion T2	XEB3020
	29	Screw	VPZ30P100FTC
	30	Screw	VBA1094
	31	Motor (TRAY)	VXM1106
	32	Flexible Cable (7P)	VDA1835
	33	• • • • •	
	34	Tray Belt	VEB1317
	35	Rubber Roller	VEB1318
	36	Roller Shaft	VLL1511
	37	Slide Table	VNK5557
	38	Motor Holder	ANW7259
	39	Worm Gear	ANW7269
	40	Tray Gear	ANW7265
	41	Screw	JGZ17P028FTC
	42	• • • • •	
	43	Cap	VNL1936
	44	TM Stopper	ANG7460
	45	Thrust Spring	VBH1339

2.6 TRAVERSE MECHANISM ASSY-S


15 (Torque : 0.12 ± 0.01 N•m)
Silicone Adhesive
GEM1037
17
10
17
8
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17
10
7
1
6
To
DVDM CN121
(Pickup)
12
14
9
13
16
4 (Adjustment Screw)
Silicone Adhesive
GEM1037
5
Screw Tight
GYL1001
5
15 (Torque : 0.12 ± 0.01 N•m)
To SSIB CN1
(Spindle Motor)
16
2
To
SSIB CN2
(Stepping Motor)
11
NON-CONTACT SIDE
CONTACT SIDE

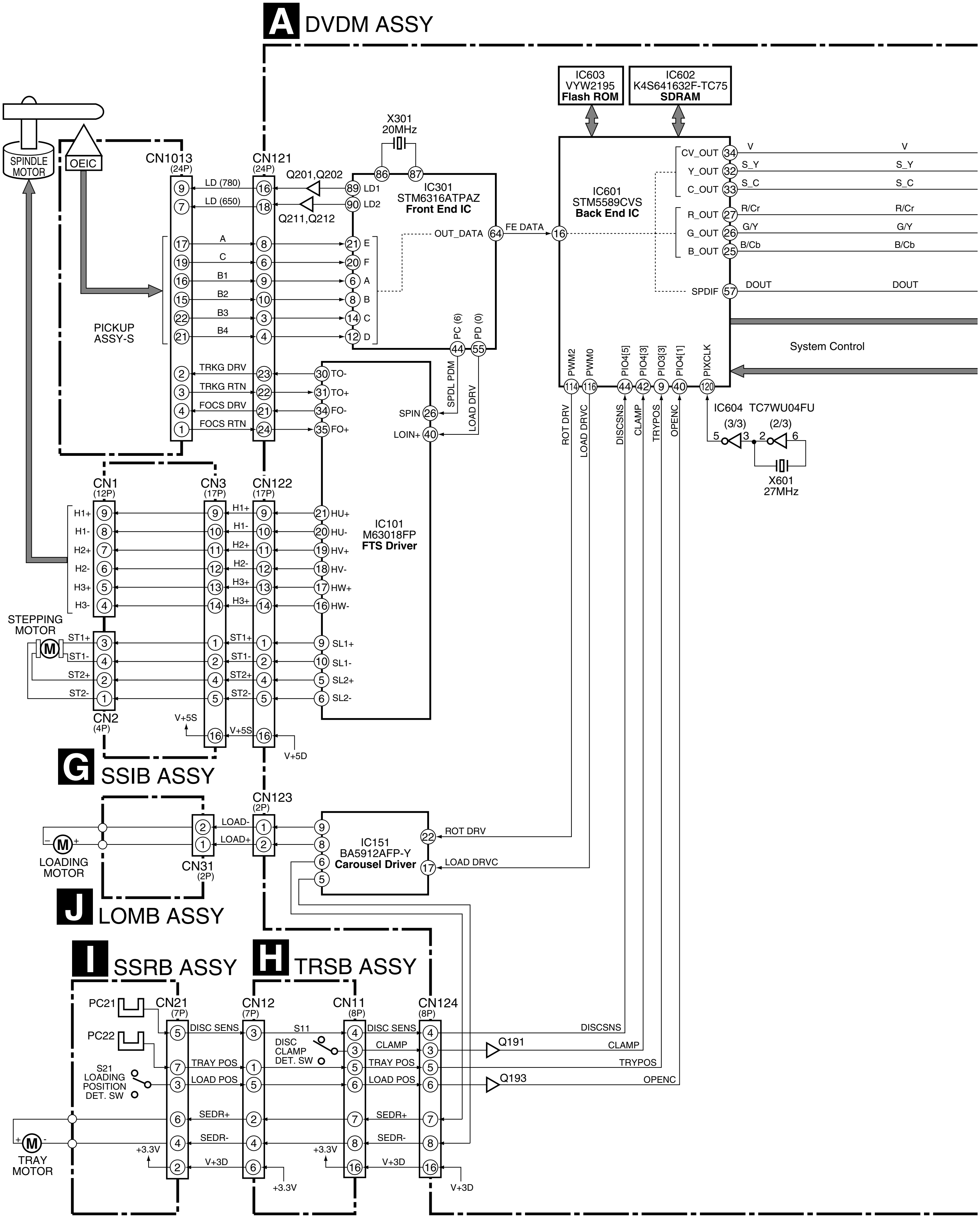
TRAVERSE MECHANISM ASSY-S parts List

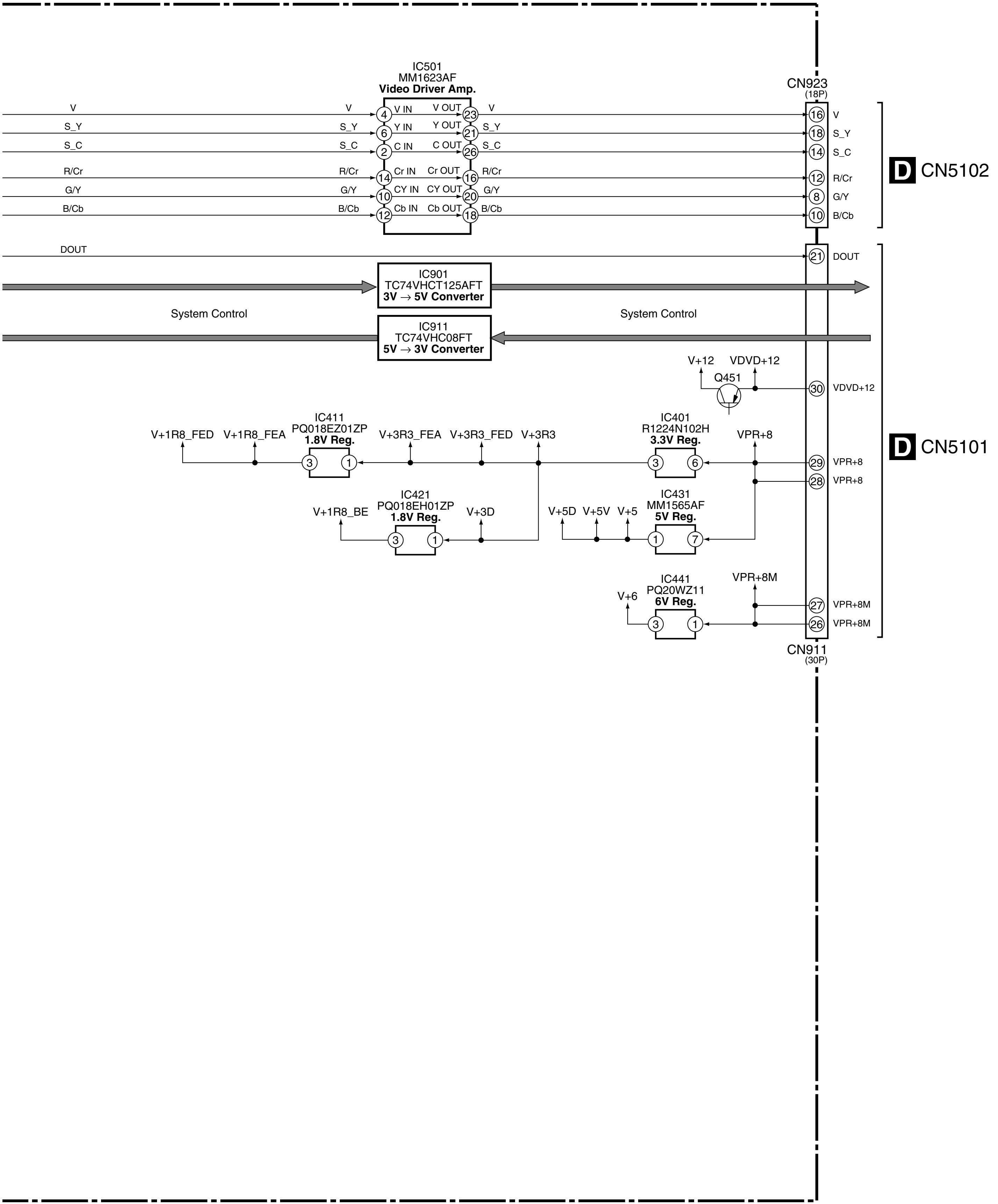
Mark	No.	Description	Part No.
	1	Spindle Motor 04	VXM1112
	2	Stepping Motor 04	VXM1113
	3	Pickup assy-S	OXX8005
	4	Skew Screw 04	VBA1091
	5	Skew Spring	VBH1335
	6	Guide Bar	VLL1514
	7	Sub Guide Bar	VLL1515
	8	Leaf Spring	VNC1023
	9	Joint Spring	VNC1019
	10	Support Spring	VNC1020
NSP	11	Mechanism Chassis 04	VNE2344
	12	Damper Sheet	VEB1335
	13	Spacer	VNL1913
	14	Joint 03	VNL1949
	15	Tapping Screw 04	VBA1092
	16	Screw	BBZ20P050FTC
	17	Screw	PMA26P100FTC

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

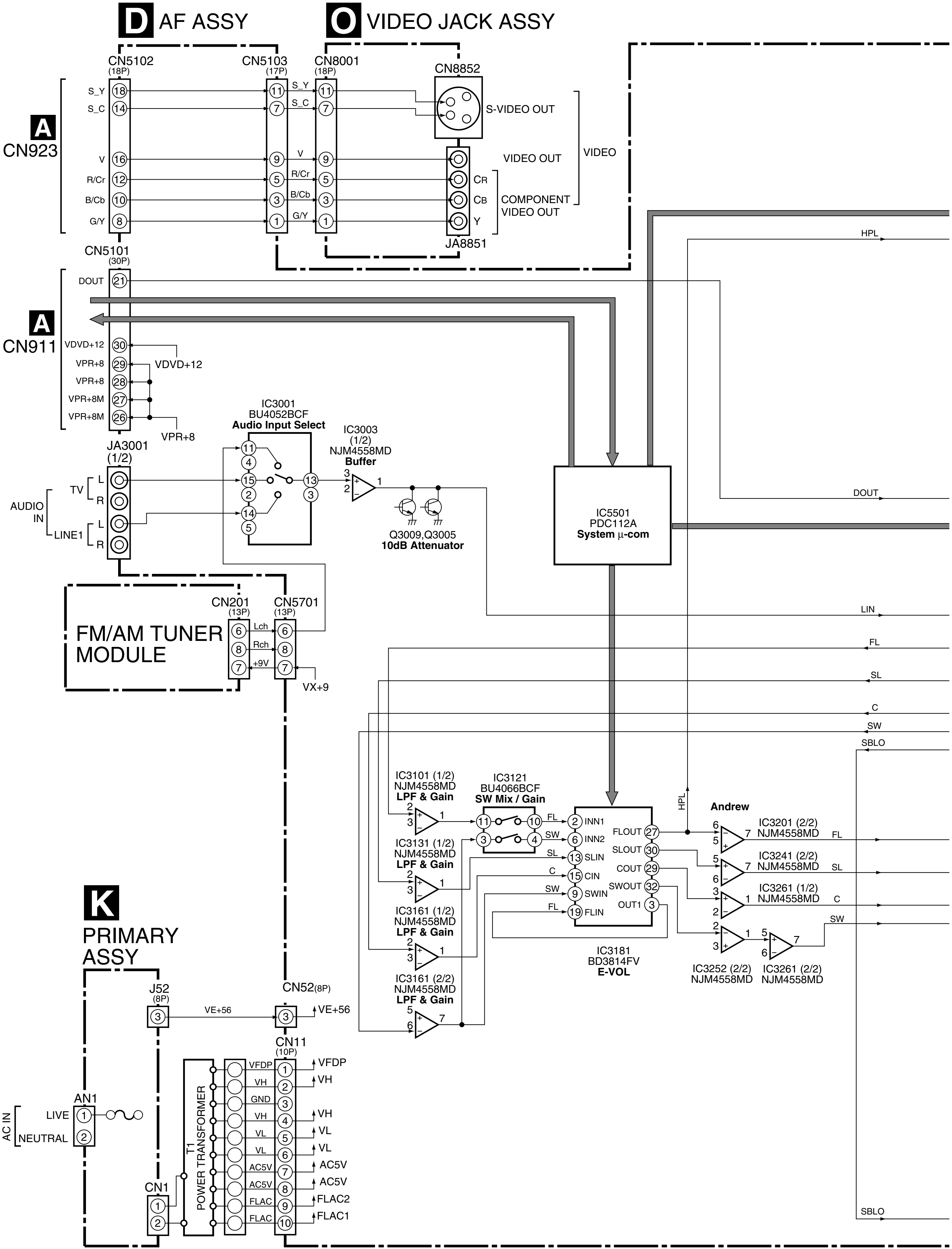
3.1 BLOCK DIAGRAM

3.1.1 DVD SECTION

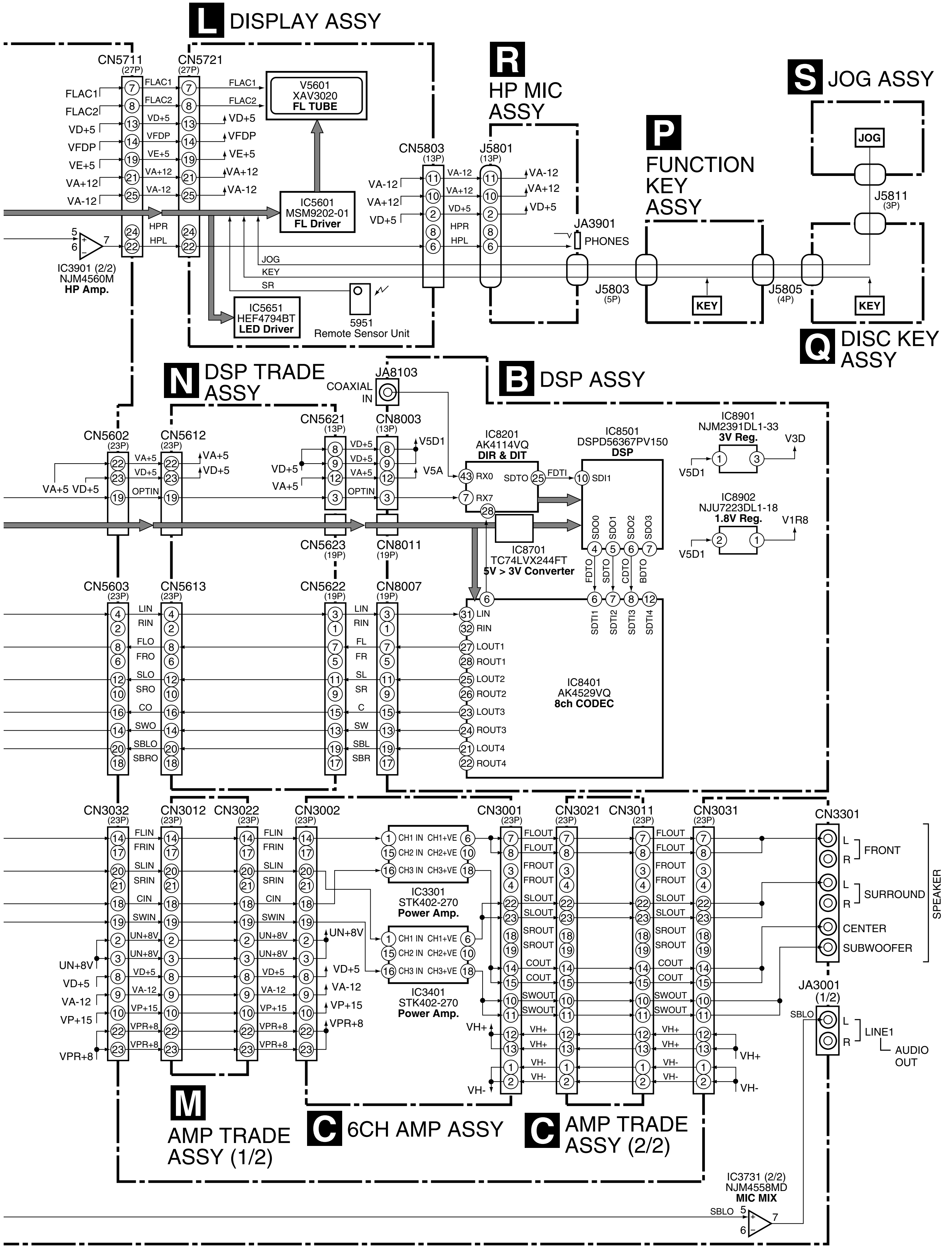

A DVDM ASSY
IC603 VYW2195 Flash ROM
IC602 K4S641632F-TC75 SDRAM
X301 20MHz
86
87
SPINDLE MOTOR
OEIC
CN1013 (24P)
CN121 (24P)
Q201,Q202
Q211,Q212
LD (780)
LD (650)
89 LD1
90 LD2
IC301 STM6316ATPAZ Front End IC
OUT_DATA 64
FE DATA
16
IC601 STM5589CVS Back End IC
CV_OUT 34 V
Y_OUT 32 S_Y
C_OUT 33 S_C
R_OUT 27 R/Cr
G_OUT 26 G/Y
B_OUT 25 B/Cb
SPDIF 57 DOUT
System Control
A
C
B1
B2
B3
B4
21 E
20 F
6 A
8 B
14 C
12 D
PICKUP ASSY-S
PC (6) 44
PD (0) 55
SPDL PDM
LOAD DRV
TRKG DRV
TRKG RTN
FOCS DRV
FOCS RTN
30 TO-
31 TO+
34 FO-
35 FO+
SPIN 26
LOIN+ 40
PWM2 114
PWM0 116
PIO4[5] 44
PIO4[3] 42
PIO3[3] 9
PIO4[1] 40
PIXCLK 120
ROT DRV
LOAD DRVC
DISCSNS
CLAMP
TRYPOS
OPENC
IC604 TC7WU04FU
(3/3)
(2/3)
X601 27MHz
CN1 (12P)
CN3 (17P)
CN122 (17P)
H1+
H1-
H2+
H2-
H3+
H3-
21 HU+
20 HU-
19 HV+
18 HV-
17 HW+
16 HW-
IC101 M63018FP FTS Driver
STEPPING MOTOR
ST1+
ST1-
ST2+
ST2-
9 SL1+
10 SL1-
5 SL2+
6 SL2-
CN2 (4P)
V+5S
V+5D
G SSIB ASSY
CN123 (2P)
LOAD-
LOAD+
LOADING MOTOR
CN31 (2P)
IC151 BA5912AFP-Y Carousel Driver
22 ROT DRV
17 LOAD DRVC
J LOMB ASSY
I SSRB ASSY
H TRSB ASSY
PC21
PC22
CN21 (7P)
CN12 (7P)
CN11 (8P)
CN124 (8P)
DISC SENS
S11 DISC CLAMP DET. SW
CLAMP
TRAY POS
LOAD POS
S21 LOADING POSITION DET. SW
Q191
Q193
DISCSNS
CLAMP
TRYPOS
OPENC
SEDR+
SEDR-
+3.3V
V+3D
TRAY MOTOR


IC501
MM1623AF
Video Driver Amp.
V
S_Y
S_C
R/Cr
G/Y
B/Cb
4 V IN
6 Y IN
2 C IN
14 Cr IN
10 CY IN
12 Cb IN
V OUT 23
Y OUT 21
C OUT 26
Cr OUT 16
CY OUT 20
Cb OUT 18
CN923
(18P)
16 V
18 S_Y
14 S_C
12 R/Cr
8 G/Y
10 B/Cb
D CN5102
DOUT
21 DOUT
IC901
TC74VHCT125AFT
3V → 5V Converter
System Control
IC911
TC74VHC08FT
5V → 3V Converter
System Control
V+12
VDVD+12
Q451
30 VDVD+12
IC411
PQ018EZ01ZP
1.8V Reg.
V+1R8_FED
V+1R8_FEA
V+3R3_FEA
V+3R3_FED
V+3R3
IC401
R1224N102H
3.3V Reg.
VPR+8
29 VPR+8
28 VPR+8
D CN5101
IC421
PQ018EH01ZP
1.8V Reg.
V+1R8_BE
V+3D
V+5D
V+5V
V+5
IC431
MM1565AF
5V Reg.
IC441
PQ20WZ11
6V Reg.
V+6
VPR+8M
27 VPR+8M
26 VPR+8M
CN911
(30P)

3.1.2 MAIN SECTION

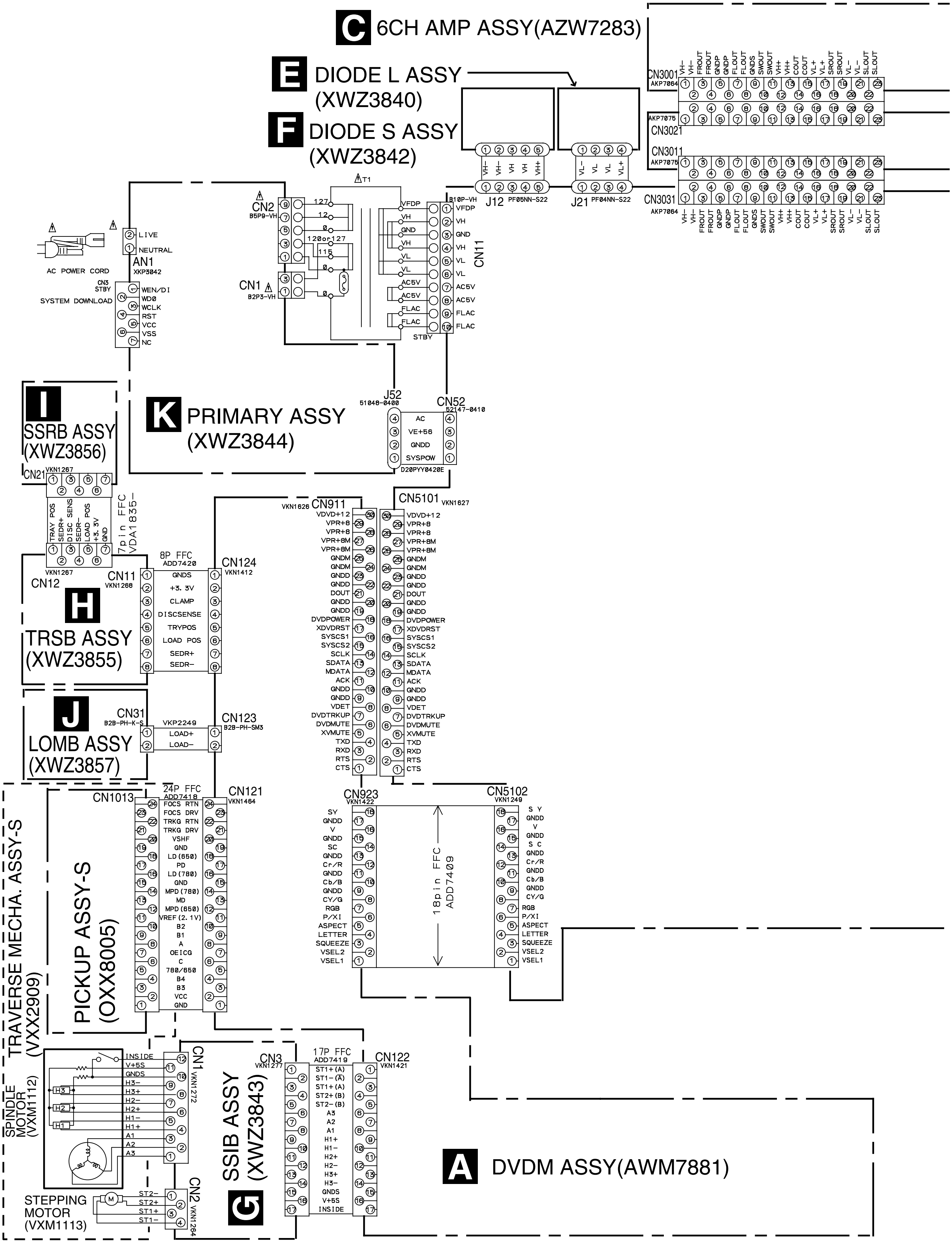


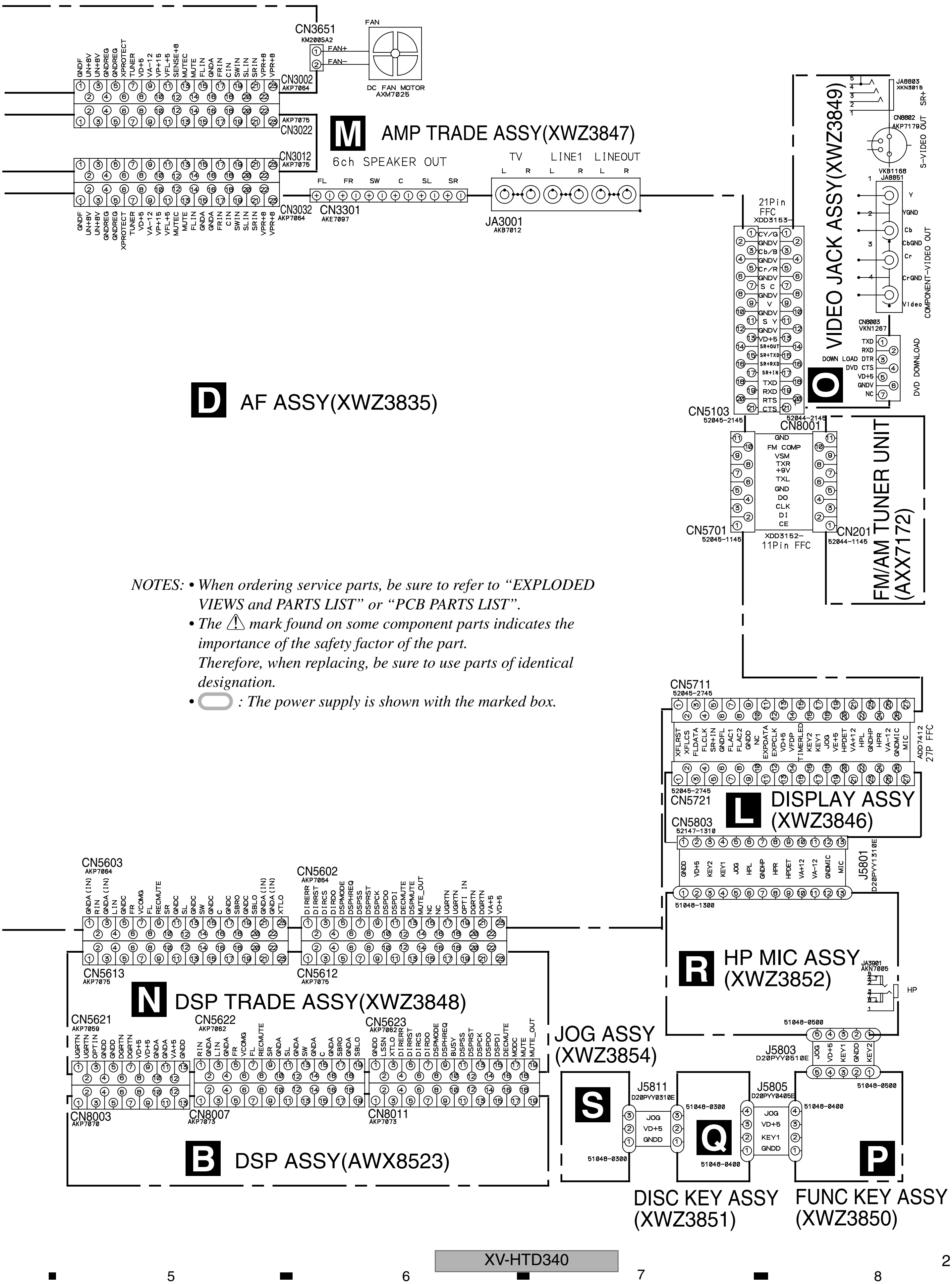
D AF ASSY
O VIDEO JACK ASSY
A CN923
CN5102 (18P)
CN5103 (17P)
CN8001 (18P)
CN8852
S_Y 18
S_C 14
V 16
R/Cr 12
B/Cb 10
G/Y 8
S_Y 11
S_C 7
V 9
R/Cr 5
B/Cb 3
G/Y 1
S-VIDEO OUT
VIDEO OUT
VIDEO
CR
CB
Y
COMPONENT VIDEO OUT
JA8851
CN5101 (30P)
DOUT 21
A CN911
VDVD+12 30
VPR+8 29
VPR+8 28
VPR+8M 27
VPR+8M 26
VDVD+12
VPR+8
HPL
DOUT
IC3001 BU4052BCF Audio Input Select
IC3003 (1/2) NJM4558MD Buffer
Q3009,Q3005 10dB Attenuator
JA3001 (1/2)
AUDIO IN
TV L R
LINE1 L R
IC5501 PDC112A System μ-com
FM/AM TUNER MODULE
CN201 (13P)
CN5701 (13P)
Lch
Rch
+9V
VX+9
LIN
FL
SL
C
SW
SBLO
IC3101 (1/2) NJM4558MD LPF & Gain
IC3121 BU4066BCF SW Mix / Gain
IC3131 (1/2) NJM4558MD LPF & Gain
IC3161 (1/2) NJM4558MD LPF & Gain
IC3161 (2/2) NJM4558MD LPF & Gain
INN1
INN2
SLIN
CIN
SWIN
FLIN
FLOUT
SLOUT
COUT
SWOUT
OUT1
IC3181 BD3814FV E-VOL
HPL
Andrew
IC3201 (2/2) NJM4558MD
IC3241 (2/2) NJM4558MD
IC3261 (1/2) NJM4558MD
IC3252 (2/2) NJM4558MD
IC3261 (2/2) NJM4558MD
K PRIMARY ASSY
J52 (8P)
VE+56
CN52 (8P)
CN11 (10P)
AN1
AC IN
LIVE
NEUTRAL
CN1
T1 POWER TRANSFORMER
VFDP
VH
GND
VL
AC5V
FLAC
FLAC2
FLAC1



L DISPLAY ASSY
CN5711 (27P)
CN5721 (27P)
FLAC1
FLAC2
VD+5
VFDP
VE+5
VA+12
VA-12
HPR
HPL
V5601 XAV3020 FL TUBE
IC5601 MSM9202-01 FL Driver
IC5651 HEF4794BT LED Driver
5951 Remote Sensor Unit
JOG
KEY
SR
IC3901 (2/2) NJM4560M HP Amp.
R HP MIC ASSY
CN5803 (13P)
J5801 (13P)
JA3901 PHONES
J5803 (5P)
P FUNCTION KEY ASSY
KEY
J5805 (4P)
S JOG ASSY
JOG
J5811 (3P)
Q DISC KEY ASSY
N DSP TRADE ASSY
JA8103 COAXIAL IN
B DSP ASSY
CN5602 (23P)
CN5612 (23P)
VA+5
VD+5
OPTIN
CN5621 (13P)
CN8003 (13P)
V5D1
V5A
CN5623 (19P)
CN8011 (19P)
IC8201 AK4114VQ DIR & DIT
RX0
RX7
SDTO
FDTI
IC8501 DSPD56367PV150 DSP
SDI1
SDO0 SDO1 SDO2 SDO3
FDTO SDTO CDTO BDTO
IC8701 TC74LVX244FT 5V > 3V Converter
IC8901 NJM2391DL1-33 3V Reg.
V3D
IC8902 NJU7223DL1-18 1.8V Reg.
V1R8
V5D1
CN5603 (23P)
CN5613 (23P)
CN5622 (19P)
CN8007 (19P)
LIN RIN FLO FRO SLO SRO CO SWO SBLO SBRO
LIN RIN FL FR SL SR C SW SBL SBR
IC8401 AK4529VQ 8ch CODEC
LIN RIN LOUT1 ROUT1 LOUT2 ROUT2 LOUT3 ROUT3 LOUT4 ROUT4
SDTI1 SDTI2 SDTI3 SDTI4
CN3032 (23P)
CN3012 (23P)
CN3022 (23P)
CN3002 (23P)
FLIN FRIN SLIN SRIN CIN SWIN UN+8V VD+5 VA-12 VP+15 VPR+8
UN+8V
VD+5
VA-12
VP+15
VPR+8
IC3301 STK402-270 Power Amp.
IC3401 STK402-270 Power Amp.
CH1 IN CH1+VE
CH2 IN CH2+VE
CH3 IN CH3+VE
CN3001 (23P)
CN3021 (23P)
CN3011 (23P)
CN3031 (23P)
FLOUT FROUT SLOUT SROUT COUT SWOUT VH+ VH-
VH+
VH-
CN3301
L R FRONT
L R SURROUND
CENTER
SUBWOOFER
SPEAKER
JA3001 (1/2)
SBLO
L R LINE1 AUDIO OUT
M AMP TRADE ASSY (1/2)
C 6CH AMP ASSY
C AMP TRADE ASSY (2/2)
IC3731 (2/2) NJM4558MD MIC MIX
SBLO

3.2 OVERALL WIRING DIAGRAM

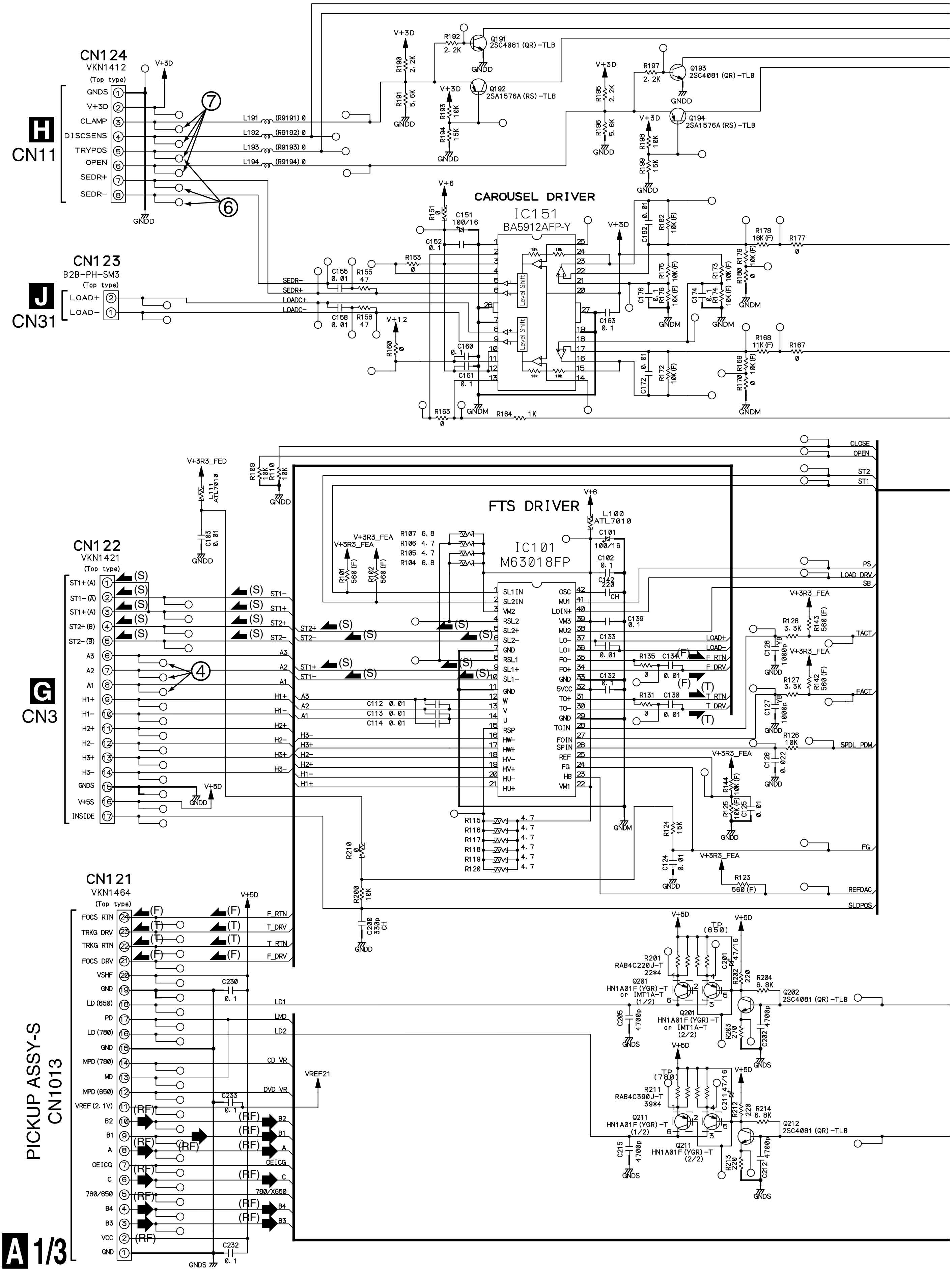

A
B
C
D
E
F
C 6CH AMP ASSY(AZW7283)
E DIODE L ASSY (XWZ3840)
F DIODE S ASSY (XWZ3842)
CN3001 AKP7064
CN3021 AKP7075
CN3011 AKP7075
CN3031 AKP7064
VH− VH− FROUT FROUT GNDP GNDP FLOUT FLOUT GNDS SWOUT SWOUT VH+ VH+ COUT COUT VL+ VL+ SROUT SROUT VL− VL− SLOUT SLOUT
J12 PF05NN-S22
VH− VH− VH VH+ VH+
J21 PF04NN-S22
VL− VL VL VL+
AC POWER CORD
AN1 XKP3042
LIVE
NEUTRAL
CN3 STBY
SYSTEM DOWNLOAD
WEN/DI
WD0
WCLK
RST
VCC
VSS
NC
CN2 B5P9-VH
CN1 B2P3-VH
T1
127
12
0
120or127
115
CN11 B10P-VH
VFDP
VH
GND
VH
VL
VL
AC5V
AC5V
FLAC
FLAC
STBY
K PRIMARY ASSY (XWZ3844)
J52 51048-0400
CN52 52147-0410
AC
VE+56
GNDD
SYSPOW
D20PYY0420E
I SSRB ASSY (XWZ3856)
CN21 VKN1267
TRAY POS
SEDR+
DISC SENS
SEDR−
LOAD POS
+3.3V
GND
7pin FFC VDA1835−
VKN1267
CN12
CN11 VKN1266
H TRSB ASSY (XWZ3855)
8P FFC ADD7420
GNDS
+3.3V
CLAMP
DISCSENSE
TRYPOS
LOAD POS
SEDR+
SEDR−
CN124 VKN1412
J LOMB ASSY (XWZ3857)
CN31 B2B-PH-K-S
VKP2249
LOAD+
LOAD−
CN123 B2B-PH-SM3
CN911 VKN1626
CN5101 VKN1627
VDVD+12
VPR+8
VPR+8
VPR+8M
VPR+8M
GNDM
GNDM
GNDD
GNDD
DOUT
GNDD
GNDD
DVDPOWER
XDVDRST
SYSCS1
SYSCS2
SCLK
SDATA
MDATA
ACK
GNDD
GNDD
VDET
DVDTRKUP
DVDMUTE
XVMUTE
TXD
RXD
RTS
CTS
TRAVERSE MECHA. ASSY-S (VXX2909)
PICKUP ASSY-S (OXX8005)
CN1013
24P FFC ADD7418
CN121 VKN1464
FOCS RTN
FOCS DRV
TRKG RTN
TRKG DRV
VSHF
GND
LD(650)
PD
LD(780)
GND
MPD(780)
MD
MPD(650)
VREF(2.1V)
B2
B1
A
OEICG
C
780/650
B4
B3
VCC
GND
CN923 VKN1422
CN5102 VKN1249
18pin FFC ADD7409
SY
GNDD
V
GNDD
SC
GNDD
Cr/R
GNDD
Cb/B
GNDD
CY/G
RGB
P/XI
ASPECT
LETTER
SQUEEZE
VSEL2
VSEL1
SPINDLE MOTOR (VXM1112)
H3
H2
H1
CN1 VKN1272
INSIDE
V+5S
GNDS
H3−
H3+
H2−
H2+
H1−
H1+
A1
A2
A3
STEPPING MOTOR (VXM1113)
M
CN2 VKN1264
ST2−
ST2+
ST1+
ST1−
G SSIB ASSY (XWZ3843)
CN3 VKN1277
17P FFC ADD7419
CN122 VKN1421
ST1+(A)
ST1−(A)
ST1+(A)
ST2+(B)
ST2−(B)
A3
A2
A1
H1+
H1−
H2+
H2−
H3+
H3−
GNDS
V+5S
INSIDE
A DVDM ASSY(AWM7881)


M AMP TRADE ASSY(XWZ3847)
CN3651 KM200SA2
FAN+
FAN−
FAN
DC FAN MOTOR AXM7025
CN3002 AKP7064
CN3022 AKP7075
CN3012 AKP7075
CN3032 AKP7064
GNDF UN+8V UN+8V GNDREG GNDREG XPROTECT TUNER VD+5 VA−12 VP+15 VFL+15 SENSE+8 MUTEC MUTE FLIN GNDA FRIN CIN SWIN SLIN SRIN VPR+8 VPR+8
6ch SPEAKER OUT
FL FR SW C SL SR
CN3301 AKE7097
TV LINE1 LINEOUT
L R L R L R
JA3001 AKB7012
D AF ASSY(XWZ3835)
21Pin FFC XDD3153
CY/G GNDV Cb/B GNDV Cr/R GNDV S C GNDV V GNDV S Y GNDV VD+5 SR+OUT SR+TXD SR+RXD SR+IN TXD RXD RTS CTS
CN5103 52045-2145
52044-2145
O VIDEO JACK ASSY(XWZ3849)
JA8803 XKN3015
SR+
CN8802 AKP7179
S-VIDEO OUT
VKB1168
JA8851
Y YGND Cb CbGND Cr CrGND Video
COMPONENT-VIDEO OUT
CN8003 VKN1267
DOWN LOAD
TXD RXD DTR DVD CTS VD+5 GNDV NC
DVD DOWNLOAD
CN8001
GND FM COMP VSM TXR +9V TXL GND DO CLK DI CE
CN5701 52045-1145
XDD3152- 11Pin FFC
CN201 52044-1145
FM/AM TUNER UNIT (AXX7172)
CN5711 52045-2745
XFLRST XFLCS FLDATA FLCLK SR+IN GNDFL FLAC1 FLAC2 GNDD NC EXPDATA EXPCLK VD+5 VFDP TIMERLED KEY2 KEY1 JOG VE+5 HPDET VA+12 HPL GNDHP HPR VA−12 GNDMIC MIC
ADD7412 27P FFC
52045-2745
CN5721
L DISPLAY ASSY (XWZ3846)
CN5803 52147-1310
GNDD VD+5 KEY2 KEY1 JOG HPL GNDHP HPR HPDET VA+12 VA−12 GNDMIC MIC
J5801 D20PYY1310E
51048-1300
R HP MIC ASSY (XWZ3852)
JA3901 AKN7005
HP
51048-0500
J5803 D20PYY0510E
JOG VD+5 KEY1 GNDD KEY2
51048-0500
JOG ASSY (XWZ3854)
S
J5811 D20PYY0310E
JOG VD+5 GNDD
51048-0300
51048-0300
Q
51048-0400
J5805 D20PYY0405E
JOG VD+5 KEY1 GNDD
51048-0400
P
DISC KEY ASSY (XWZ3851)
FUNC KEY ASSY (XWZ3850)
CN5603 AKP7064
GNDA(IN) RIN GNDA(IN) LIN GNDC FR VCOMG FL RECMUTE SR GNDC SL GNDC SW GNDC C GNDC SBRO GNDC SBLO GNDA(IN) GNDA(IN) XTLO
CN5602 AKP7064
DIRERR DIRRST DIRCS DIRDO DSPMODE DSPHREQ DSPSS DSPRST DSPCK DSPDO DSPDI DECMUTE DSPMUTE MUTE_OUT NC NC UGRTN UGRTN OPTI IN DGRTN DGRTN VA+5 VD+5
CN5613 AKP7075
CN5612 AKP7075
N DSP TRADE ASSY(XWZ3848)
CN5621 AKP7059
UGRTN UGRTN OPTIN GNDD GNDD DGRTN DGRTN VD+5 GNDA GNDA VA+5 GNDD
CN5622 AKP7062
RIN GNDA LIN GNDA FR VCOMG FL RECMUTE SR GNDA SL GNDA SW GNDA C GNDA SBRO GNDA SBLO
CN5623 AKP7062
GNDD LSSN XTLO DIRERR DIRRST DIRCS DIRDO DSPMODE DSPHREQ BUSY DSPSS DSPRST DSPCK DSPDO DSPDI DECMUTE MODC MUTE MUTE_OUT
CN8003 AKP7070
CN8007 AKP7073
CN8011 AKP7073
B DSP ASSY(AWX8523)

NOTES: • *When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".*

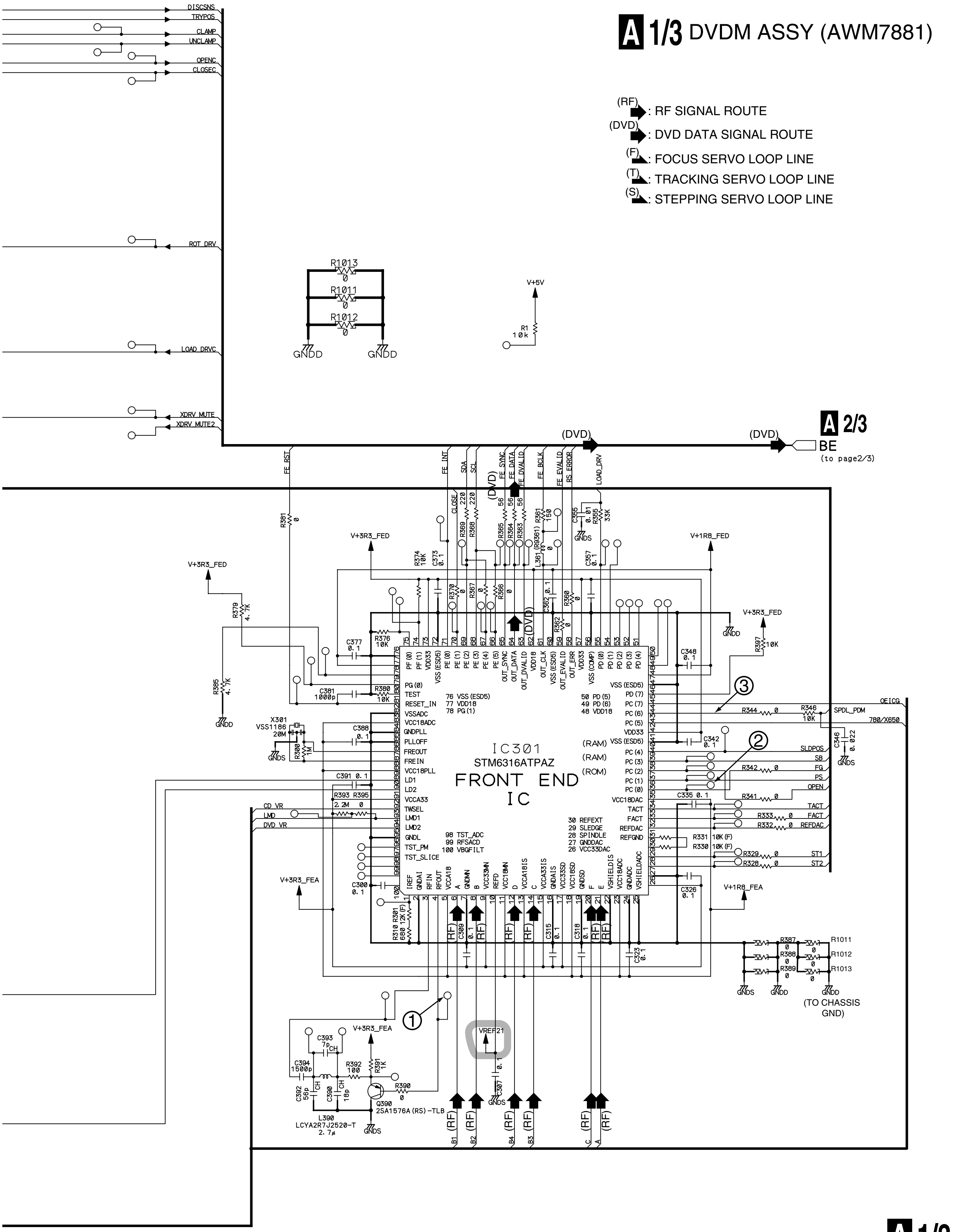
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.*
  Therefore, when replacing, be sure to use parts of identical designation.
- ▭ *: The power supply is shown with the marked box.*

3.3 DVDM ASSY(1/3)

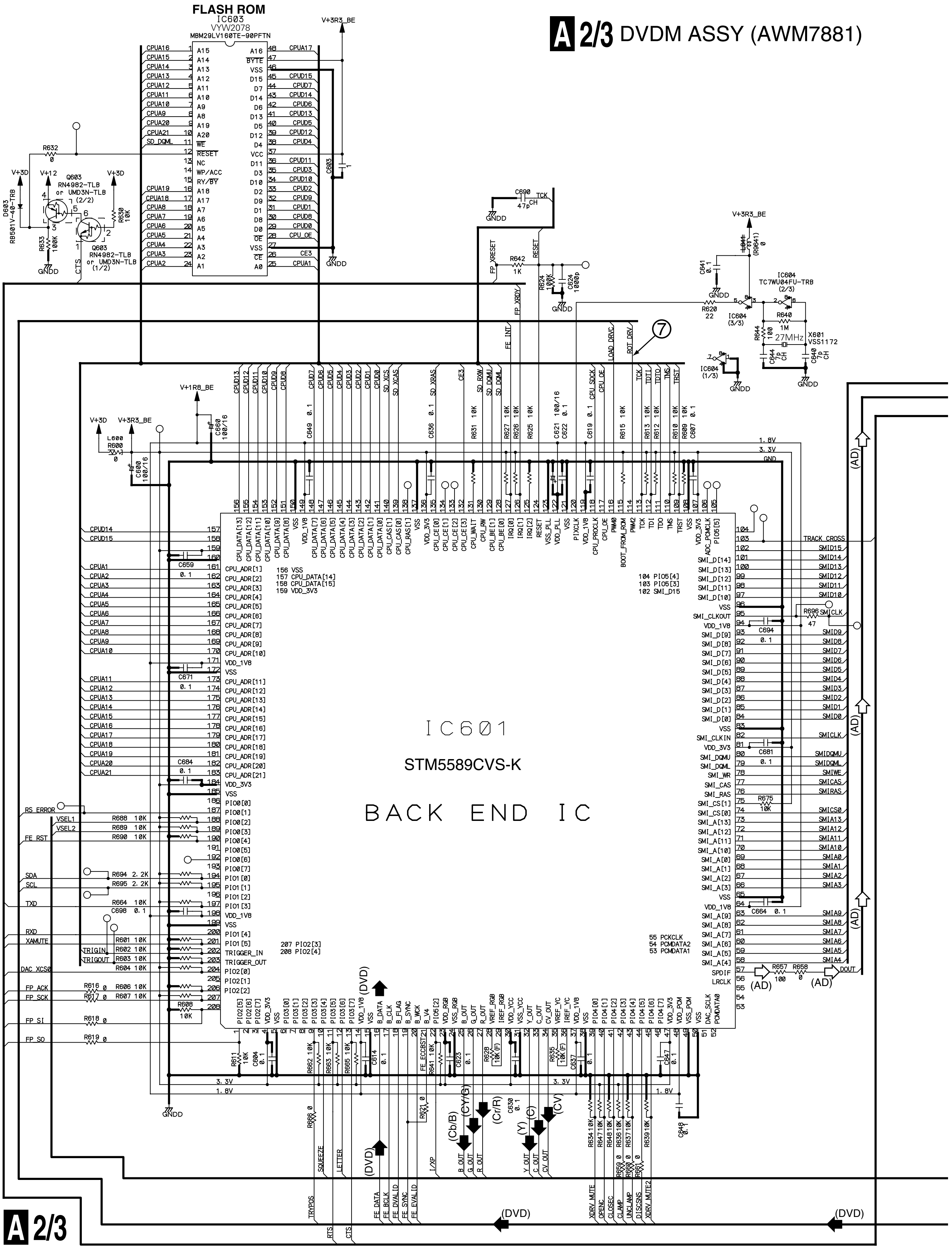

A
B
C
D
E
F
H CN11
CN124 VKN1412 (Top type)
GNDS 1
V+3D 2
CLAMP 3
DISCSENS 4
TRYPOS 5
OPEN 6
SEDR+ 7
SEDR- 8
⑦
⑥
L191 (R9191) 0
L192 (R9192) 0
L193 (R9193) 0
L194 (R9194) 0
R192 2.2K
Q191 2SC4081 (QR)-TLB
Q192 2SA1576A (RS)-TLB
R190 2.2K
R191 5.6K
R193 10K
R194 15K
R197 2.2K
Q193 2SC4081 (QR)-TLB
Q194 2SA1576A (RS)-TLB
R195 2.2K
R196 5.6K
R198 10K
R199 15K
V+3D
GNDD
CAROUSEL DRIVER
IC151 BA5912AFP-Y
R151 0
C151 100/16
C152 0.1
R153 0
C155 0.01
R155 47
C158 0.01
R158 47
R160 0
C160 0.1
C161 0.1
C163 0.1
R163 0
R164 1K
C182 0.01
R182 10K (F)
R178 16K (F)
R177 0
R179 10K (F)
R180 0
R175 10K (F)
R176 10K (F)
C176 0.1
R173 10K (F)
R174 10K (F)
C174 0.1
R168 11K (F)
R167 0
R169 10K (F)
R170 0
C172 0.01
R172 10K (F)
Level Shift
V+6
V+12
GNDM
CN123 B2B-PH-SM3 (Top type)
J CN31
LOAD+ 2
LOAD- 1
SEDR-
SEDR+
LOADC+
LOADC-
V+3R3_FED
L111 ATL7010
C103 0.01
R109 10K
R110 10K
FTS DRIVER
L100 ATL7010
C101 100/16
C102 0.1
C142 220 CH
C139 0.1
C133 0.01
C132 0.1
R135 0
C134 0.01
R131 0
C130 0.01
IC101 M63018FP
R107 6.8
R106 4.7
R105 4.7
R104 6.8
R101 560 (F)
R102 560 (F)
V+3R3_FEA
SL1IN SL2IN VM2 RSL2 SL2+ SL2- GND RSL1 SL1+ SL1- GND W V U RSP HW- HW+ HV- HV+ HU- HU+
OSC MU1 LOIN+ VM3 MU2 LO- LO+ FO- FO+ GND 5VCC TO+ TO- GND TOIN FOIN SPIN REF FG HB VM1
C112 0.01
C113 0.01
C114 0.01
R115 4.7
R116 4.7
R117 4.7
R118 4.7
R119 4.7
R120 4.7
R210 0
R200 10K
C200 330p CH
CLOSE
OPEN
ST2
ST1
PS
LOAD DRV
SB
R128 3.3K
R143 560 (F)
TACT
C128 1000p
R127 3.3K
R142 560 (F)
FACT
C127 1000p
R126 10K
SPDL PDM
C126 0.022
R144 10K (F)
R125 10K (F)
C125 0.01
R124 15K
C124 0.01
R123 560 (F)
FG
REFDAC
SLDPOS
F RTN
F DRV
T RTN
T DRV
CN122 VKN1421 (Top type)
G CN3
ST1+ (A) 1
ST1- (A) 2
ST1+ (A) 3
ST2+ (B) 4
ST2- (B) 5
A3 6
A2 7
A1 8
H1+ 9
H1- 10
H2+ 11
H2- 12
H3+ 13
H3- 14
GNDS 15
V+5S 16
INSIDE 17
④
V+5D
CN121 VKN1464 (Top type)
PICKUP ASSY-S CN1013
A 1/3
FOCS RTN 24
TRKG DRV 23
TRKG RTN 22
FOCS DRV 21
VSHF 20
GND 19
LD (650) 18
PD 17
LD (780) 16
GND 15
MPD (780) 14
MD 13
MPD (650) 12
VREF (2.1V) 11
B2 10
B1 9
A 8
OEICG 7
C 6
780/650 5
B4 4
B3 3
VCC 2
GND 1
C230 0.1
C233 0.1
C232 0.1
LD1
LMD
LD2
CD VR
DVD VR
VREF21
780/X650
(RF)
GNDS
R201 RAB4C220J-T 22*4
Q201 HN1A01F (YGR)-T or IMT1A-T (1/2)
Q201 HN1A01F (YGR)-T or IMT1A-T (2/2)
TP (650)
C201 47/16
R202 220
R204 6.8K
Q202 2SC4081 (QR)-TLB
C205 4700p
R203 270
C202 4700p
R211 RAB4C390J-T 39*4
TP (780)
Q211 HN1A01F (YGR)-T (1/2)
Q211 HN1A01F (YGR)-T (2/2)
C211 47/16
R212 220
R214 6.8K
Q212 2SC4081 (QR)-TLB
C215 4700p
R213 220
C212 4700p

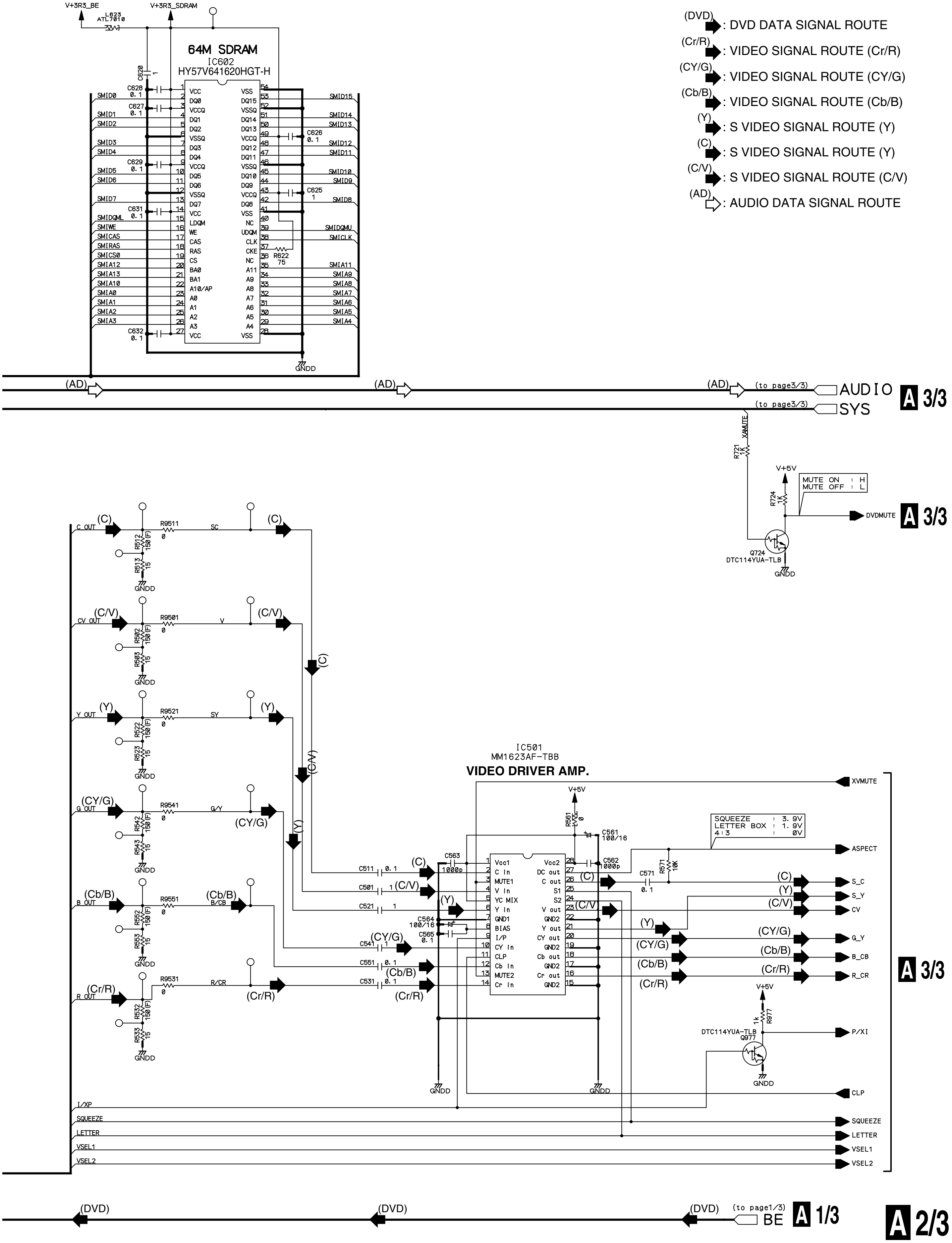
A 1/3 DVDM ASSY (AWM7881)

(RF) : RF SIGNAL ROUTE
(DVD) : DVD DATA SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(T) : TRACKING SERVO LOOP LINE
(S) : STEPPING SERVO LOOP LINE

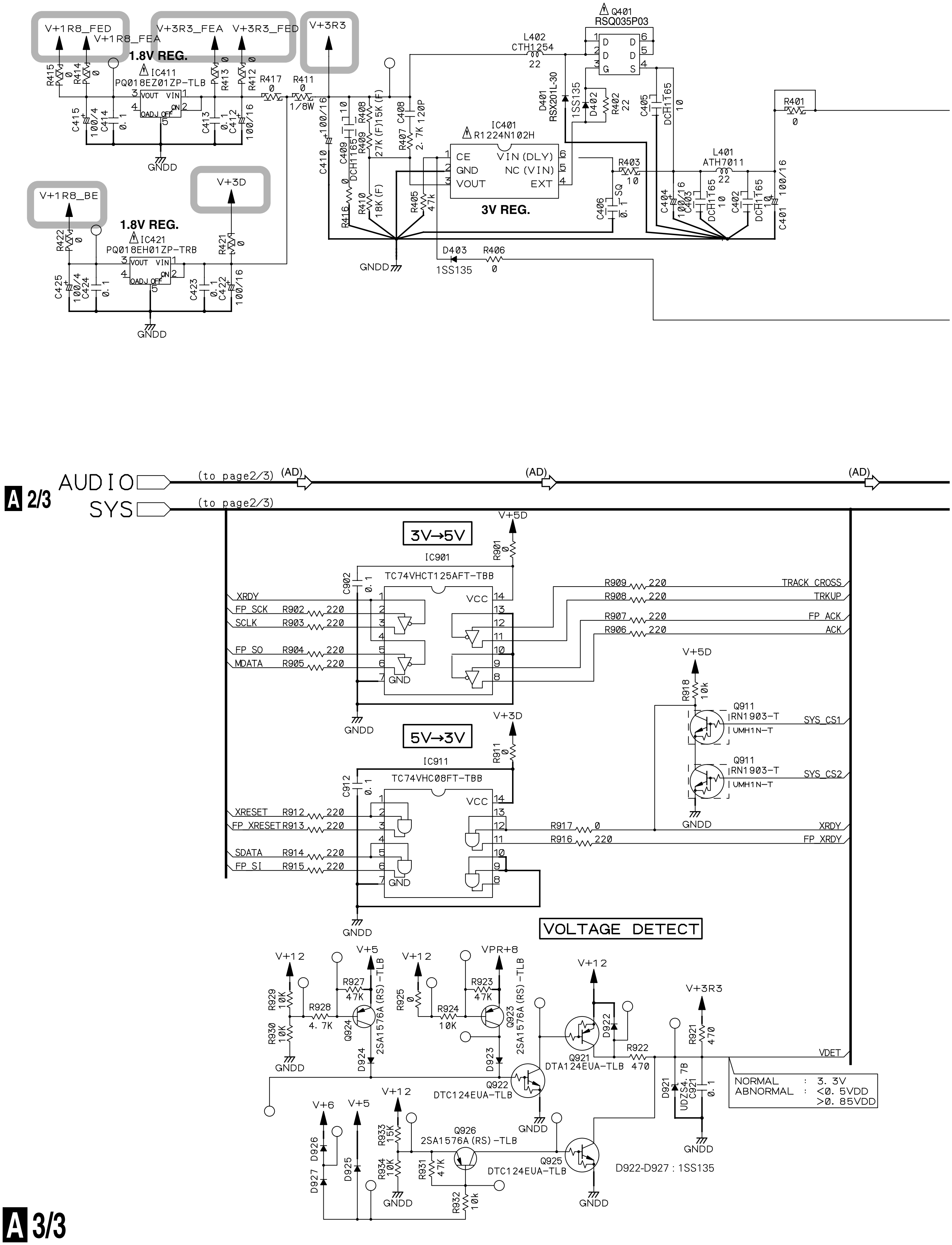

DISCSNS
TRYPOS
CLAMP
UNCLAMP
OPENC
CLOSEC
ROT DRV
LOAD DRVC
XDRV MUTE
XDRV MUTE2
R1013 0
R1011 0
R1012 0
GNDD
V+5V
R1 10k
(DVD)
A 2/3
BE
(to page2/3)
FE RST
R381 0
FE INT
SDA
SCL
FE SYNC
FE DATA
FE DVALID
FE BCLK
FE EVALID
RS ERROR
LOAD DRV
CLOSE
R369 220
R368 220
R365 56
R364 56
R363 56
R361 150
C355 0.01
R355 33K
GNDS
V+3R3_FED
V+1R8_FED
R374 10K
C373 0.1
L361 (R3361) 0
C357 0.1
R370 0
R367 0
R366 0
C362 0.1
R360 0
R362 0
V+3R3_FED
R379 4.7K
R385 4.7K
C377 0.1
R376 10K
C381 1000p
R380 10K
C348 0.1
R397 10K
X301 VSS1186 20M
R300 1M
C388 0.1
C391 0.1
R393 2.2M
R395 0
CD VR
LMD
DVD VR
V+3R3_FEA
C300 0.1
R310 680
R301 12K (F)
IC301
STM6316ATPAZ
FRONT END IC
(RAM)
(RAM)
(ROM)
PF (0) PF (1) VDD33 VSS (ESD5) PE (0) PE (1) PE (2) PE (3) PE (4) PE (5) OUT_SYNC OUT_DATA OUT_DVALID VDD18 OUT_CLK VSS (ESD5) OUT_EVALID OUT_ERR VDD33 VSS (COMP) PD (0) PD (1) PD (2) PD (3) PD (4)
PG (0) TEST RESET_IN VSSADC VCC18ADC GNDPLL PLLOFF FREOUT FREIN VCC18PLL LD1 LD2 VCCA33 TWSEL LMD1 LMD2 GNDL TST_PM TST_SLICE
76 VSS (ESD5) 77 VDD18 78 PG (1)
98 TST_ADC 99 RFSACD 100 VBGFILT
VSS (ESD5) PD (7) PC (7) PC (6) PC (5) VDD33 VSS (ESD5) PC (4) PC (3) PC (2) PC (1) PC (0) VCC18DAC TACT FACT REFDAC REFGND
50 PD (5) 49 PD (6) 48 VDD18
30 REFEXT 29 SLEDGE 28 SPINDLE 27 GNDDAC 26 VCC33DAC
IREF GNDAI RFIN RFOUT VCCA18 A GNDWN B VCC33WN REFD VCC18WN D VCCA18IS C VCCA33IS GNDAIS VCC33SD VCC18SD GNDSD F E VSHIELDIS VCC18ADC GNDADC VSHIELDADC
③
②
①
OEICG
SPDL_PDM
780/X650
R344 0
R346 10K
C342 0.1
C346 0.022
SLDPOS
SB
FG
PS
OPEN
R342 0
R341 0
C335 0.1
TACT
FACT
REFDAC
R333 0
R332 0
R331 10K (F)
R330 10K (F)
R329 0
R328 0
ST1
ST2
C326 0.1
V+1R8_FEA
C309 0.1
C315 0.1
C318 0.1
C323 0.1
(RF)
R387 0
R388 0
R389 0
R1011 0
R1012 0
R1013 0
GNDS
GNDD
(TO CHASSIS GND)
VREF21
C307 0.1
C393 7p CH
C394 1500p
R392 100
R391 1K
R390 0
C392 56p CH
C390 18p CH
Q390 2SA1576A (RS) -TLB
L390 LCYA2R7J2520-T 2.7μ
B1 B2 B4 B3 C A

3.4 DVDM ASSY (2/3)

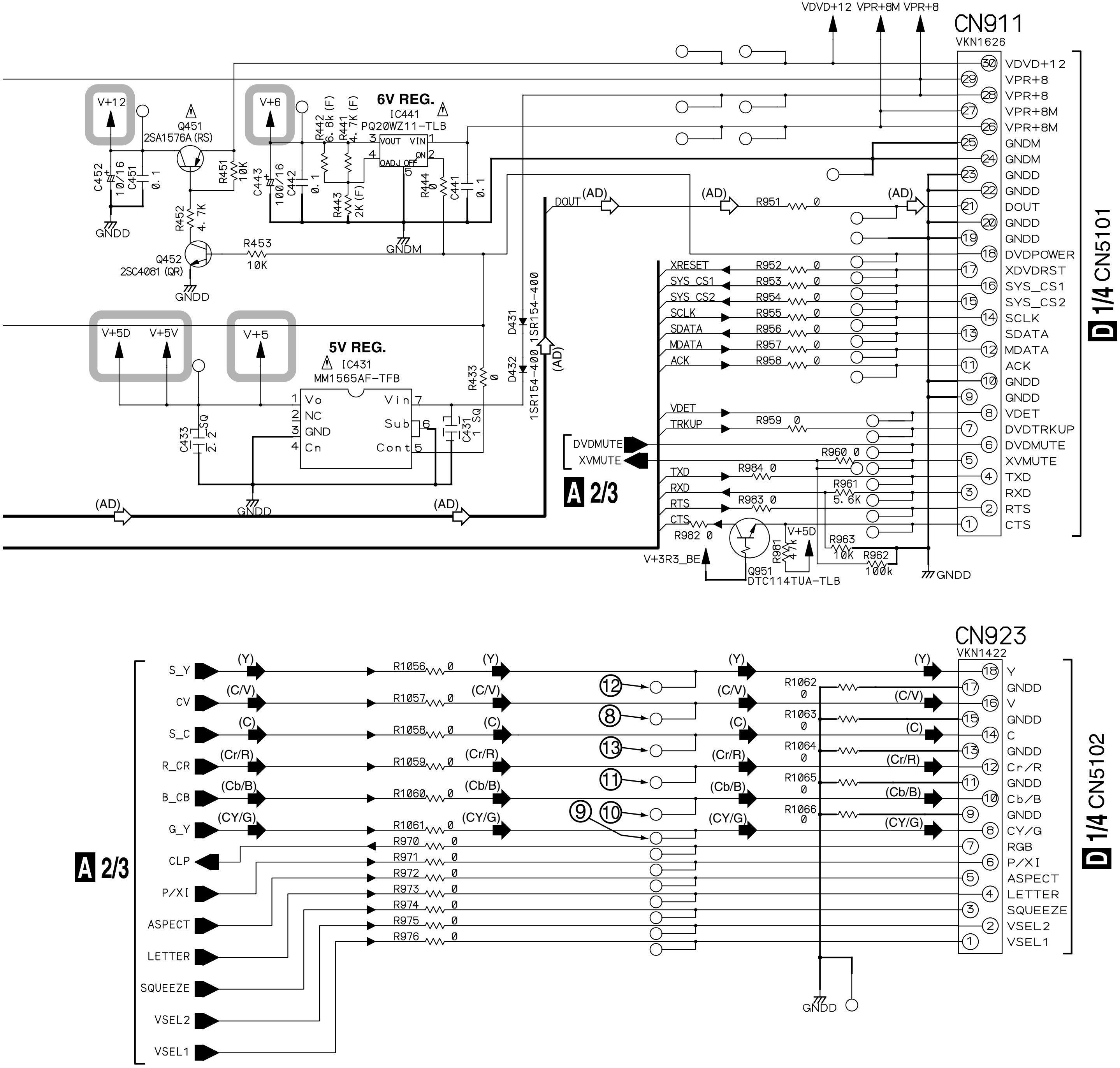

A 2/3 DVDM ASSY (AWM7881)
FLASH ROM
IC603
VYW2078
MBM29LV160TE-90PFTN
A15 A14 A13 A12 A11 A10 A9 A8 A19 A20 WE RESET NC WP/ACC RY/BY A18 A17 A7 A6 A5 A4 A3 A2 A1
A16 BYTE VSS D15 D7 D14 D6 D13 D5 D12 D4 VCC D11 D3 D10 D2 D9 D1 D8 D0 OE VSS CE A0
V+3R3_BE
C603
R632 0
V+3D
V+12
Q603
RN4982-TLB or UMD3N-TLB (2/2)
D603 RB501V-40-TRB
R633 100K
R630 10K
Q603 RN4982-TLB or UMD3N-TLB (1/2)
CTS
GNDD
C690 47p CH
TCK
FP_XRESET
R642 1K
RESET
R624 100K
C624 1000p
FP_XRDY
FE_INT
LOAD_DRVC
ROT_DRV
⑦
C641 0.1
(R9641) 0
IC604 TC7WU04FU-TRB (2/3)
R620 22
IC604 (3/3)
R640 1M
R644 100
27MHz
X601 VSS1172
C644 7p CH
C640 7p CH
IC604 (1/3)
V+1R8_BE
V+3D
V+3R3_BE
L600
R600 0
C600 100/16
C660 100/16
C649 0.1
C636 0.1
R631 10K
R627 10K
R626 10K
R625 10K
C621 100/16
C622 0.1
C619 0.1
R615 10K
R613 10K
R612 10K
R610 10K
R609 10K
C607 0.1
1.8V
3.3V
GND
C659 0.1
C671 0.1
C684 0.1
156 VSS
157 CPU_DATA[14]
158 CPU_DATA[15]
159 VDD_3V3
104 PIO5[4]
103 PIO5[3]
102 SMI_D15
IC601
STM5589CVS-K
BACK END IC
207 PIO2[3]
208 PIO2[4]
55 PCKCLK
54 PCMDATA2
53 PCMDATA1
RS_ERROR
VSEL1
VSEL2
FE_RST
R688 10K
R689 10K
R690 10K
SDA
SCL
R694 2.2K
R695 2.2K
TXD
R664 10K
C698 0.1
RXD
XAMUTE
TRIGIN
TRIGOUT
R601 10K
R602 10K
R603 10K
DAC_XCS0
R604 10K
FP_ACK
FP_SCK
R616 0
R617 0
R606 10K
R607 10K
R608 10K
FP_SI
R618 0
FP_SO
R619 0
TRACK_CROSS
SMID15 SMID14 SMID13 SMID12 SMID11 SMID10
R696 47
SMICLK
C694 0.1
SMID9 SMID8 SMID7 SMID6 SMID5 SMID4 SMID3 SMID2 SMID1 SMID0
SMICLK
C681 0.1
SMIDQMU SMIDQML SMIWE SMICAS SMIRAS
R675 10K
SMICS0 SMIA13 SMIA12 SMIA11 SMIA10 SMIA0 SMIA1 SMIA2 SMIA3
C664 0.1
SMIA9 SMIA8 SMIA7 SMIA6 SMIA5 SMIA4
R657 100
R658 0
DOUT
(AD)
(DVD)
R611 10K
C604 0.1
R662 10K
R663 10K
R665 10K
C614 0.1
FE_ECCBST
R641 10K
C623 0.1
R628 10K (F)
R635 10K (F)
C637 0.1
C647 0.1
3.3V
1.8V
GNDD
R666 0
R621 0
C630 0.1
(Cb/B) (CY/G) (Cr/R) (Y) (C) (CV)
R634 10K
R647 10K
R648 10K
R636 10K
R637 10K
R639 10K
C648 0.1
SQUEEZE
LETTER
I/XP
B_OUT G_OUT R_OUT
Y_OUT C_OUT CV_OUT
R659 0
R660 0
R661 0
XDRV_MUTE OPENC CLOSEC CLAMP UNCLAMP DISCSNS XDRV_MUTE2
TRYPOS
FE_DATA FE_BCLK FE_DVALID FE_SYNC FE_EVALID
RTS
CTS
A B C D E F
A 2/3


(DVD) : DVD DATA SIGNAL ROUTE
(Cr/R) : VIDEO SIGNAL ROUTE (Cr/R)
(CY/G) : VIDEO SIGNAL ROUTE (CY/G)
(Cb/B) : VIDEO SIGNAL ROUTE (Cb/B)
(Y) : S VIDEO SIGNAL ROUTE (Y)
(C) : S VIDEO SIGNAL ROUTE (Y)
(C/V) : S VIDEO SIGNAL ROUTE (C/V)
(AD) : AUDIO DATA SIGNAL ROUTE
V+3R3_BE
L623 ATL7010
V+3R3_SDRAM
64M SDRAM
IC602
HY57V641620HGT-H
C620 1
C628 0.1
C627 0.1
C629 0.1
C631 0.1
C632 0.1
C626 0.1
C625 1
R622 75
VCC DQ0 VCCQ DQ1 DQ2 VSSQ DQ3 DQ4 VCCQ DQ5 DQ6 VSSQ DQ7 VCC LDQM WE CAS RAS CS BA0 BA1 A10/AP A0 A1 A2 A3 VCC
VSS DQ15 VSSQ DQ14 DQ13 VCCQ DQ12 DQ11 VSSQ DQ10 DQ9 VCCQ DQ8 VSS NC UDQM CLK CKE NC A11 A9 A8 A7 A6 A5 A4 VSS
SMID0 SMID1 SMID2 SMID3 SMID4 SMID5 SMID6 SMID7 SMIDQML SMIWE SMICAS SMIRAS SMICS0 SMIA12 SMIA13 SMIA10 SMIA0 SMIA1 SMIA2 SMIA3
SMID15 SMID14 SMID13 SMID12 SMID11 SMID10 SMID9 SMID8 SMIDQMU SMICLK SMIA11 SMIA9 SMIA8 SMIA7 SMIA6 SMIA5 SMIA4
GNDD
(AD)
(to page3/3) AUDIO A 3/3
(to page3/3) SYS
XAMUTE
R721 1K
V+5V
R724 1K
MUTE ON : H
MUTE OFF : L
DVDMUTE A 3/3
Q724 DTC114YUA-TLB
C OUT R9511 0 SC R512 150(F) R513 15
CV OUT R9501 0 V R502 150(F) R503 15
Y OUT R9521 0 SY R522 150(F) R523 15
G OUT R9541 0 G/Y R542 150(F) R543 15
B OUT R9551 0 B/CB R552 150(F) R553 15
R OUT R9531 0 R/CR R532 150(F) R533 15
IC501
MM1623AF-TBB
VIDEO DRIVER AMP.
XVMUTE
V+5V
R561 0
C561 100/16
C562 1000p
C563 1000p
C564 100/16
C565 0.1
C511 0.1
C501 1
C521 1
C541 1
C551 0.1
C531 0.1
C571 0.1
R571 10K
Vcc1 C in MUTE1 V in YC MIX Y in GND1 BIAS I/P CY in CLP Cb in MUTE2 Cr in
Vcc2 DC out C out S1 S2 V out GND2 Y out CY out GND2 Cb out GND2 Cr out GND2
SQUEEZE : 3.9V
LETTER BOX : 1.9V
4:3 : 0V
ASPECT
S_C S_Y CV G_Y B_CB R_CR
A 3/3
V+5V
R977 1k
DTC114YUA-TLB Q977
P/XI
CLP
I/XP
SQUEEZE
LETTER
VSEL1
VSEL2
(DVD)
(to page1/3) BE A 1/3
A 2/3

3.5 DVDM ASSY (3/3)


A
B
C
D
E
F
V+1R8_FED
V+1R8_FEA
V+3R3_FEA
V+3R3_FED
V+3R3
1.8V REG.
IC411
PQ018EZ01ZP-TLB
R415 0
R414 0
R413 0
R412 0
R417 0
R411 0 1/8W
C415 100/4
C414 0.1
C413 0.1
C412 100/16
VOUT VIN
OADJ OFF
ON
GNDD
V+1R8_BE
V+3D
1.8V REG.
IC421
PQ018EH01ZP-TRB
R422 0
R421 0
C425 100/4
C424 0.1
C423 0.1
C422 100/16
GNDD
L402
CTH1254
22
Q401
RSQ035P03
D D
D D
G S
D401
RSX201L-30
D402
1SS135
R402 22
C405
DCH1165 10
R401 0
C410 100/16
C409 DCH1165 10
R408 15K (F)
R409 27K (F)
C408 120P
R407 2.7K
IC401
R1224N102H
CE VIN (DLY)
GND NC (VIN)
VOUT EXT
3V REG.
R416 0
R410 18K (F)
R405 47k
C406 0.1 SQ
R403 10
L401
ATH7011
22
C404 100/16
C403 DCH1165 10
C402 DCH1165 10
C401 100/16
GNDD
D403
1SS135
R406
0
AUDIO
SYS
(to page2/3)
(to page2/3)
(AD)
(AD)
(AD)
A 2/3
3V→5V
V+5D
R901 0
IC901
TC74VHCT125AFT-TBB
C902 0.1
VCC
GND
XRDY
FP SCK R902 220
SCLK R903 220
FP SO R904 220
MDATA R905 220
R909 220 TRACK CROSS
R908 220 TRKUP
R907 220 FP ACK
R906 220 ACK
GNDD
5V→3V
V+3D
R911 0
IC911
TC74VHC08FT-TBB
C912 0.1
XRESET R912 220
FP XRESET R913 220
SDATA R914 220
FP SI R915 220
R917 0 XRDY
R916 220 FP XRDY
GNDD
V+5D
R918 10k
Q911
RN1903-T
UMH1N-T
SYS CS1
Q911
RN1903-T
UMH1N-T
SYS CS2
GNDD
VOLTAGE DETECT
V+12
V+5
R929 10K
R930 10K
R928 4.7K
R927 47K
Q924
2SA1576A (RS) -TLB
D924
GNDD
V+12
VPR+8
R925 0
R924 10K
R923 47K
Q923
2SA1576A (RS) -TLB
D923
V+12
Q921
DTA124EUA-TLB
D922
R922 470
V+3R3
R921 470
VDET
NORMAL : 3.3V
ABNORMAL : <0.5VDD
>0.85VDD
Q922
DTC124EUA-TLB
GNDD
D921 UDZS4.7B
C921 0.1
GNDD
V+6
V+5
V+12
D926
D927
D925
R933 15K
R934 10K
GNDD
R931 47K
Q926
2SA1576A (RS) -TLB
R932 10k
Q925
DTC124EUA-TLB
GNDD
D922-D927 : 1SS135
A 3/3

A 3/3 DVDM ASSY (AWM7881)


VDVD+12
VPR+8M
VPR+8
CN911
VKN1626
30 VDVD+12
29 VPR+8
28 VPR+8
27 VPR+8M
26 VPR+8M
25 GNDM
24 GNDM
23 GNDD
22 GNDD
21 DOUT
20 GNDD
19 GNDD
18 DVDPOWER
17 XDVDRST
16 SYS_CS1
15 SYS_CS2
14 SCLK
13 SDATA
12 MDATA
11 ACK
10 GNDD
9 GNDD
8 VDET
7 DVDTRKUP
6 DVDMUTE
5 XVMUTE
4 TXD
3 RXD
2 RTS
1 CTS
D 1/4 CN5101
V+12
Q451
2SA1576A (RS)
C452 10/16
C451 0.1
R451 10K
GNDD
R452 4.7K
Q452
2SC4081 (QR)
R453 10K
V+6
6V REG.
IC441
PQ20WZ11-TLB
R442 6.8k (F)
R441 4.7k (F)
VOUT VIN
ON
OADJ OFF
C443 100/16
C442 0.1
R443 2K (F)
R444 0
C441 0.1
GNDM
DOUT
(AD)
R951 0
XRESET
SYS_CS1
SYS_CS2
SCLK
SDATA
MDATA
ACK
R952 0
R953 0
R954 0
R955 0
R956 0
R957 0
R958 0
VDET
TRKUP
R959 0
DVDMUTE
XVMUTE
R960 0
TXD
RXD
RTS
CTS
R984 0
R961 5.6K
R983 0
R982 0
V+5D
R981 47k
R963 10K
R962 100k
V+3R3_BE
Q951
DTC114TUA-TLB
A 2/3
V+5D V+5V
V+5
5V REG.
IC431
MM1565AF-TFB
1 Vo
2 NC
3 GND
4 Cn
Vin 7
Sub 6
Cont 5
C433 2.2 SQ
C431 1 SQ
R433 0
D431 1SR154-400
D432 1SR154-400
CN923
VKN1422
18 Y
17 GNDD
16 V
15 GNDD
14 C
13 GNDD
12 Cr/R
11 GNDD
10 Cb/B
9 GNDD
8 CY/G
7 RGB
6 P/XI
5 ASPECT
4 LETTER
3 SQUEEZE
2 VSEL2
1 VSEL1
D 1/4 CN5102
S_Y
CV
S_C
R_CR
B_CB
G_Y
CLP
P/XI
ASPECT
LETTER
SQUEEZE
VSEL2
VSEL1
(Y)
(C/V)
(C)
(Cr/R)
(Cb/B)
(CY/G)
R1056 0
R1057 0
R1058 0
R1059 0
R1060 0
R1061 0
R970 0
R971 0
R972 0
R973 0
R974 0
R975 0
R976 0
R1062 0
R1063 0
R1064 0
R1065 0
R1066 0
⑫
⑧
⑬
⑪
⑨
⑩
GNDD

(Cr/R): VIDEO SIGNAL ROUTE (Cr/R)

(CY/G): VIDEO SIGNAL ROUTE (CY/G)

(Cb/B): VIDEO SIGNAL ROUTE (Cb/B)

(Y): S VIDEO SIGNAL ROUTE (Y)

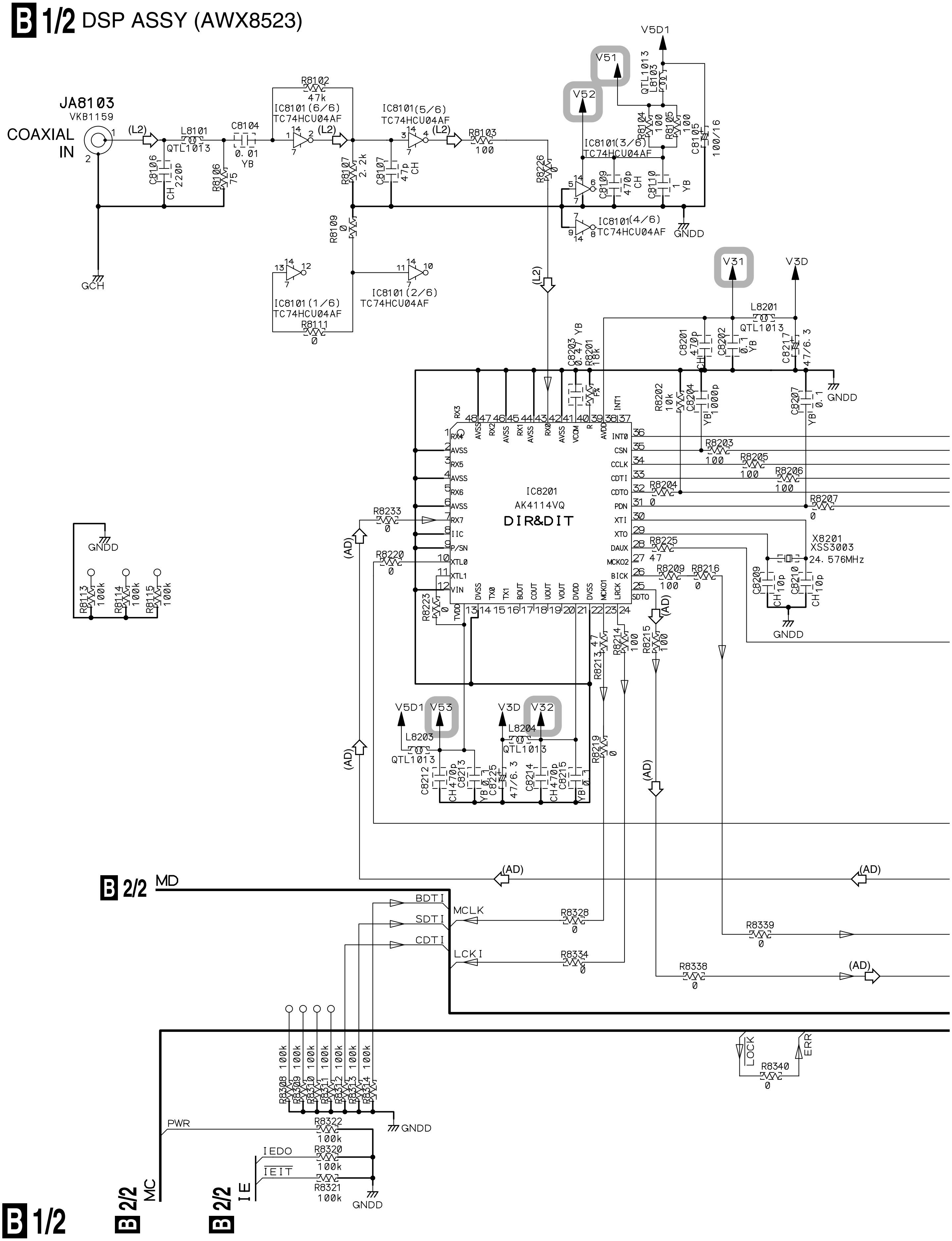
(C): S VIDEO SIGNAL ROUTE (Y)

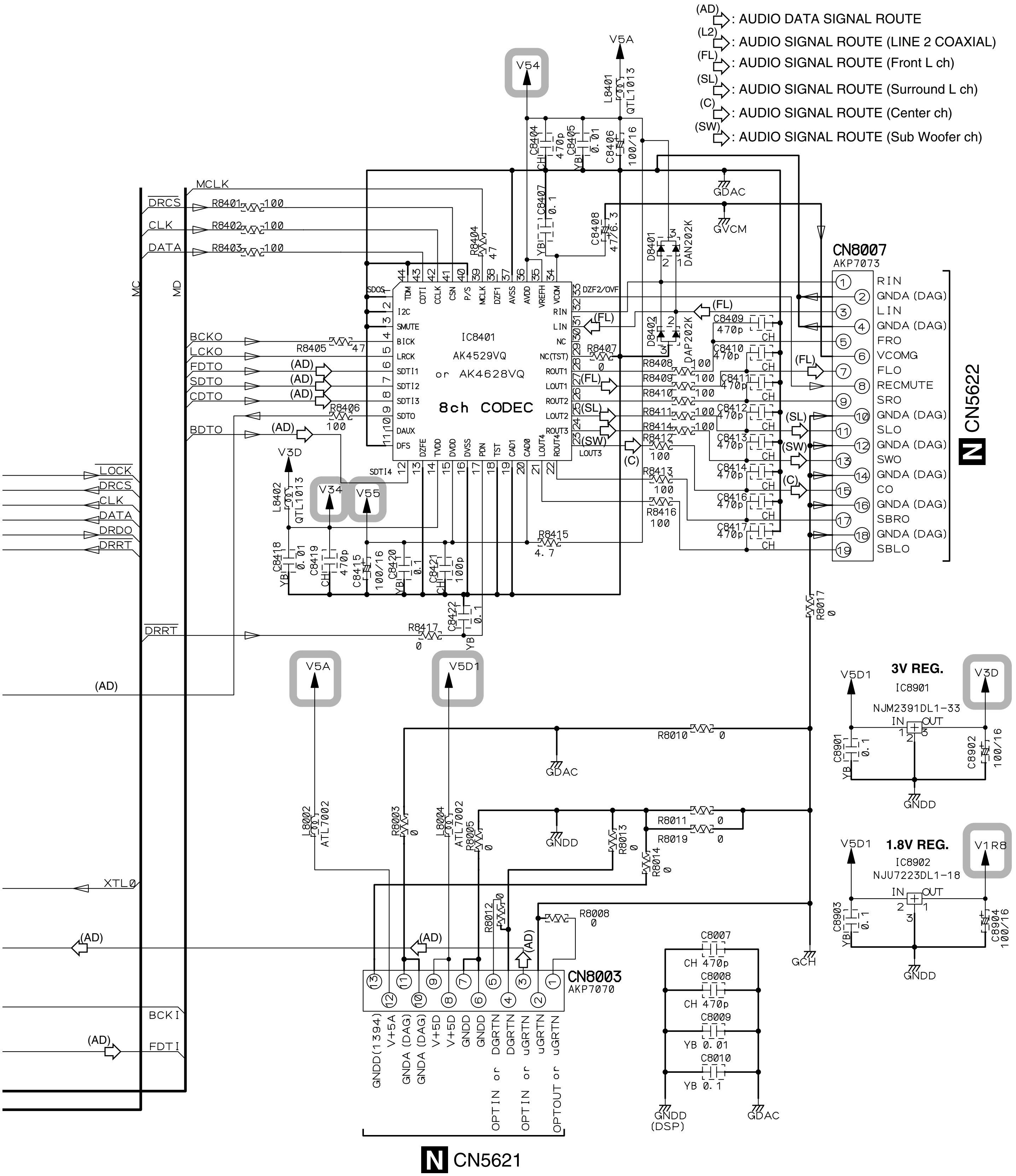
(C/V): S VIDEO SIGNAL ROUTE (C/V)

(AD): AUDIO DATA SIGNAL ROUTE

A 3/3

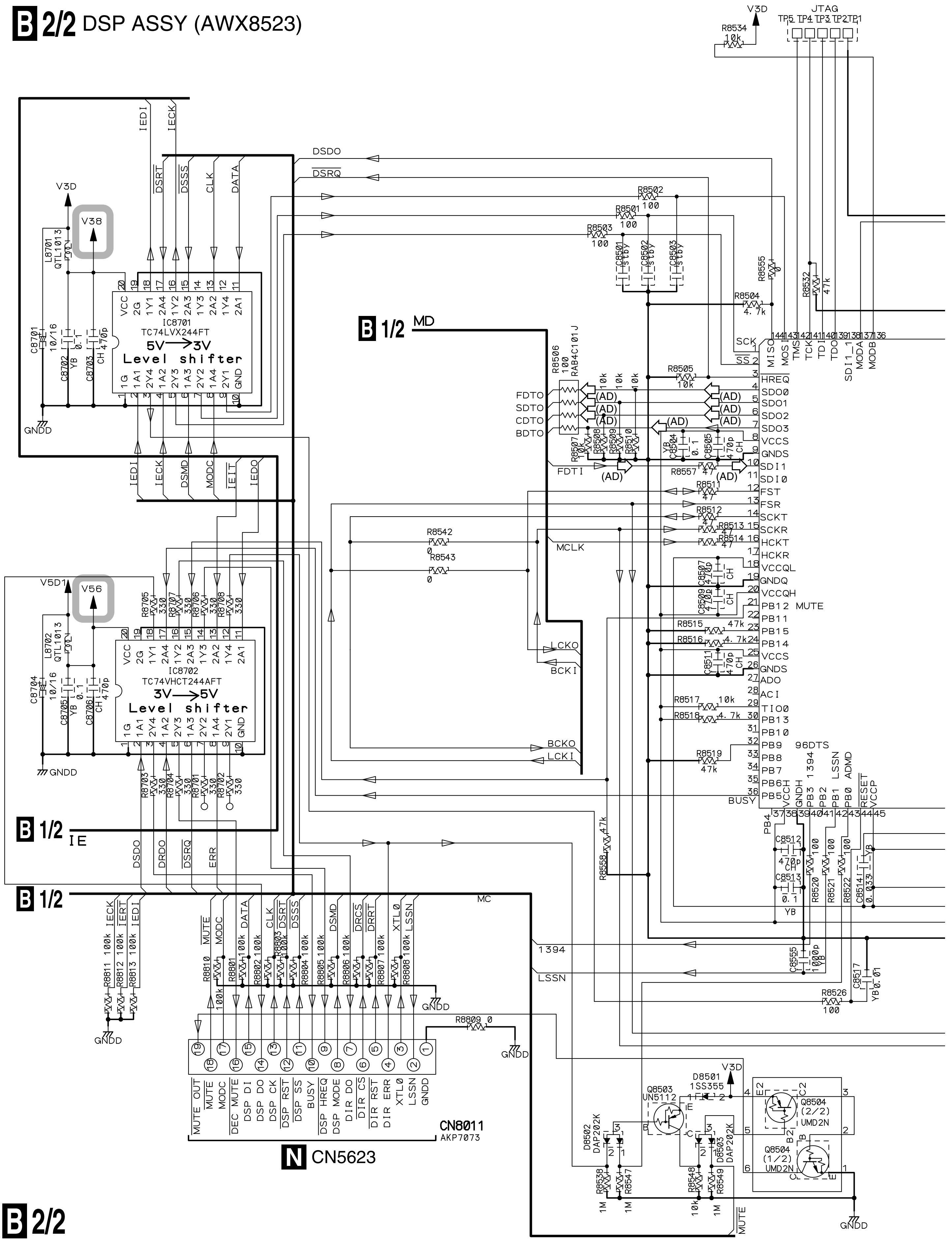
3.6 DSP ASSY (1/2)


B 1/2 DSP ASSY (AWX8523)
JA8103
VKB1159
COAXIAL IN
GCH
L8101 QTL1013
C8104 0.01 YB
C8106 CH 220p
R8106 75
R8102 47k
IC8101(6/6) TC74HCU04AF
IC8101(5/6) TC74HCU04AF
R8103 100
R8107 2.2k
C8107 47p CH
R8109 0
R8226 0
IC8101(1/6) TC74HCU04AF
IC8101(2/6) TC74HCU04AF
R8111 0
(L2)
V5D1
V51
V52
QTL1013 L8103
R8104 100
R8105 100
C8105 100/16
IC8101(3/6) TC74HCU04AF
C8109 470p CH
C8110 1 YB
IC8101(4/6) TC74HCU04AF
GNDD
V31
V3D
L8201 QTL1013
C8201 470p CH
C8202 0.1 YB
C8217 47/6.3
C8203 0.47 YB
R8201 18k
R8202 10k
C8204 1000p YB
C8207 0.1 YB
IC8201
AK4114VQ
DIR&DIT
RX4 AVSS RX5 AVSS RX6 AVSS RX7 IIC P/SN XTL0 XTL1 VIN
TVDD DVSS TX0 TX1 BOUT COUT UOUT VOUT DVDD DVSS MCKO1 LRCK SDTO
BICK MCKO2 DAUX XTO XTI PDN CDTO CDTI CCLK CSN INT0
INT1 R AVDD VCOM AVSS RX0 AVSS RX1 AVSS RX2 AVSS RX3
R8203 100
R8205 100
R8206 100
R8204 0
R8207 0
R8233 0
R8220 0
R8223 0
R8225 47
R8209 100
R8216 0
X8201 XSS3003 24.576MHz
C8209 10p CH
C8210 10p CH
R8213 47
R8214 100
R8215 100
R8219 0
(AD)
V5D1 V53
L8203 QTL1013
V3D V32
L8204 QTL1013
C8212 470p CH
C8213 0.1 YB
C8225 47/6.3
C8214 470p CH
C8215 0.1 YB
GNDD
R8113 100k
R8114 100k
R8115 100k
B 2/2 MD
BDTI
SDTI
CDTI
MCLK
LCKI
R8328 0
R8334 0
R8339 0
R8338 0
LOCK
ERR
R8340 0
R8308 100k R8309 100k R8310 100k R8311 100k R8312 100k R8313 100k R8314 100k
PWR
R8322 100k
IEDO
R8320 100k
IEIT
R8321 100k
B 2/2 MC
B 2/2 IE
B 1/2

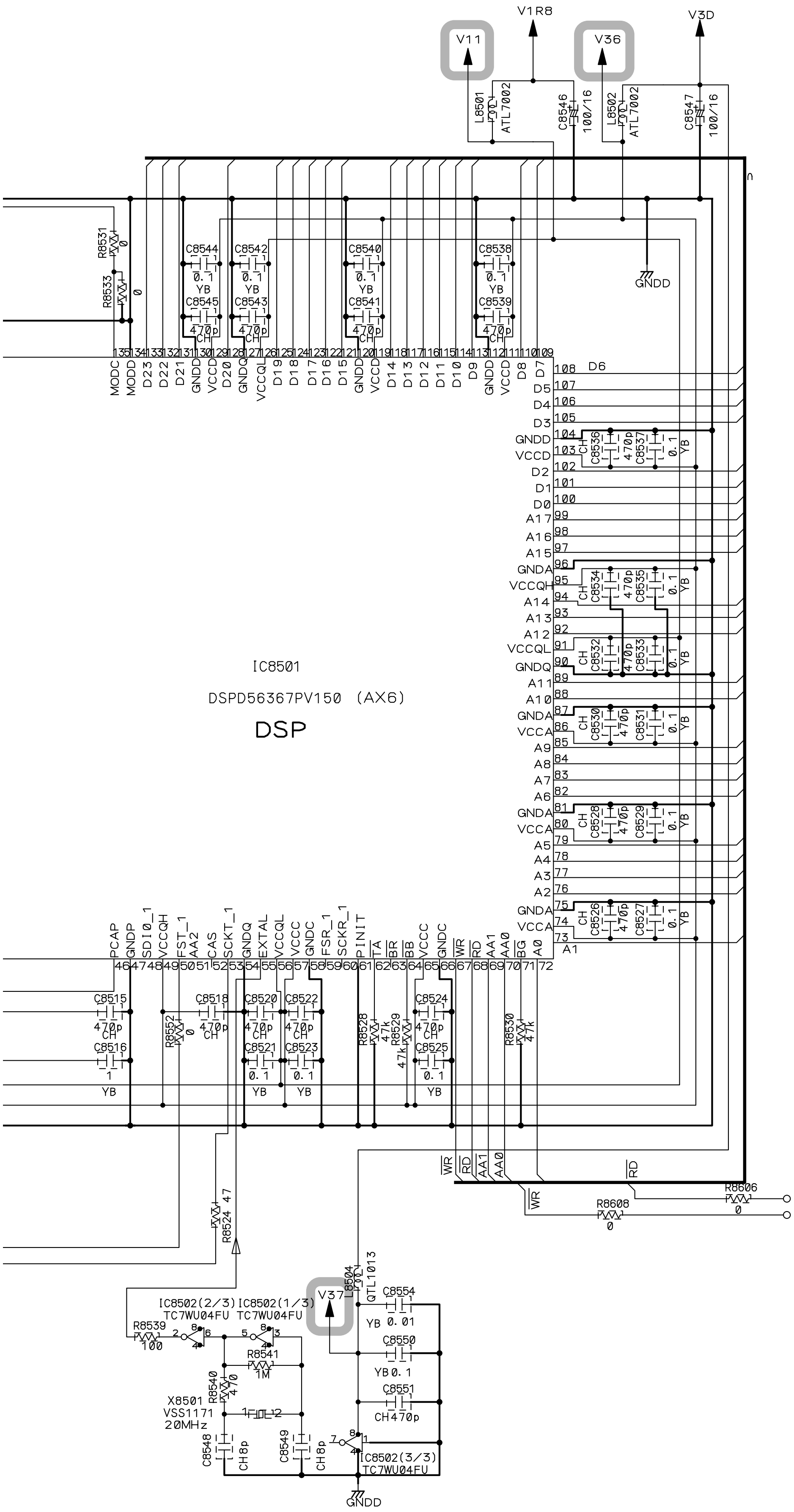

(AD) : AUDIO DATA SIGNAL ROUTE
(L2) : AUDIO SIGNAL ROUTE (LINE 2 COAXIAL)
(FL) : AUDIO SIGNAL ROUTE (Front L ch)
(SL) : AUDIO SIGNAL ROUTE (Surround L ch)
(C) : AUDIO SIGNAL ROUTE (Center ch)
(SW) : AUDIO SIGNAL ROUTE (Sub Woofer ch)
IC8401
AK4529VQ
or AK4628VQ
8ch CODEC
SDOS TDM CDTI CCLK CSN P/S MCLK DZF1 AVSS AVDD VREFH VCOM
I2C SMUTE BICK LRCK SDTI1 SDTI2 SDTI3 SDTO DAUX DFS
DZFE TVDD DVDD DVSS PDN TST CAD1 CAD0 LOUT4 ROUT4
DZF2/OVF RIN LIN NC NC(TST) ROUT1 LOUT1 ROUT2 LOUT2 ROUT3 LOUT3
SDTI4
MC
MD
MCLK
DRCS
CLK
DATA
R8401 100
R8402 100
R8403 100
R8404 47
BCKO
LCKO
FDTO
SDTO
CDTO
BDTO
R8405 47
R8406 100
V54
V5A
L8401 QTL1013
C8404 CH 470p
C8405 YB 0.01
C8406 100/16
C8407 YB 0.1
C8408 47/6.3
GDAC
GVCM
D8401 DAN202K
D8402 DAP202K
R8407 0
R8408 100
R8409 100
R8410 100
R8411 100
R8414 100
R8412 100
R8413 100
R8416 100
R8415 4.7
C8409 470p CH
C8410 470p CH
C8411 470p CH
C8412 470p CH
C8413 470p CH
C8414 470p CH
C8416 470p CH
C8417 470p CH
CN8007
AKP7073
1 RIN
2 GNDA (DAG)
3 LIN
4 GNDA (DAG)
5 FRO
6 VCOMG
7 FLO
8 RECMUTE
9 SRO
10 GNDA (DAG)
11 SLO
12 GNDA (DAG)
13 SWO
14 GNDA (DAG)
15 CO
16 GNDA (DAG)
17 SBRO
18 GNDA (DAG)
19 SBLO
N CN5622
V3D
V34
V55
L8402 QTL1013
C8418 YB 0.01
C8419 CH 470p
C8415 100/16
C8420 YB 0.1
C8421 CH 100p
C8422 YB 0.1
R8417 0
DRRT
LOCK
DRCS
CLK
DATA
DRDO
DRRT
R8017 0
V5A
V5D1
R8010 0
GDAC
L8002 ATL7002
R8003 0
L8004 ATL7002
R8005 0
GNDD
R8013 0
R8011 0
R8019 0
R8014 0
R8012 0
R8008 0
XTL0
BCKI
FDTI
CN8003
AKP7070
13 GNDD(1394)
12 V+5A
11 GNDA (DAG)
10 GNDA (DAG)
9 V+5D
8 V+5D
7 GNDD
6 GNDD
5 DGRTN or OPTIN
4 DGRTN or OPTIN
3 uGRTN or OPTIN
2 uGRTN or OPTOUT
1 uGRTN
N CN5621
GCH
3V REG.
IC8901
NJM2391DL1-33
IN OUT
V5D1
V3D
C8901 YB 0.1
C8902 100/16
GNDD
1.8V REG.
IC8902
NJU7223DL1-18
V5D1
V1R8
C8903 YB 0.1
C8904 100/16
C8007 CH 470p
C8008 CH 470p
C8009 YB 0.01
C8010 YB 0.1
GNDD (DSP)
GDAC

3.7 DSP ASSY(2/2)

B 2/2 DSP ASSY (AWX8523)

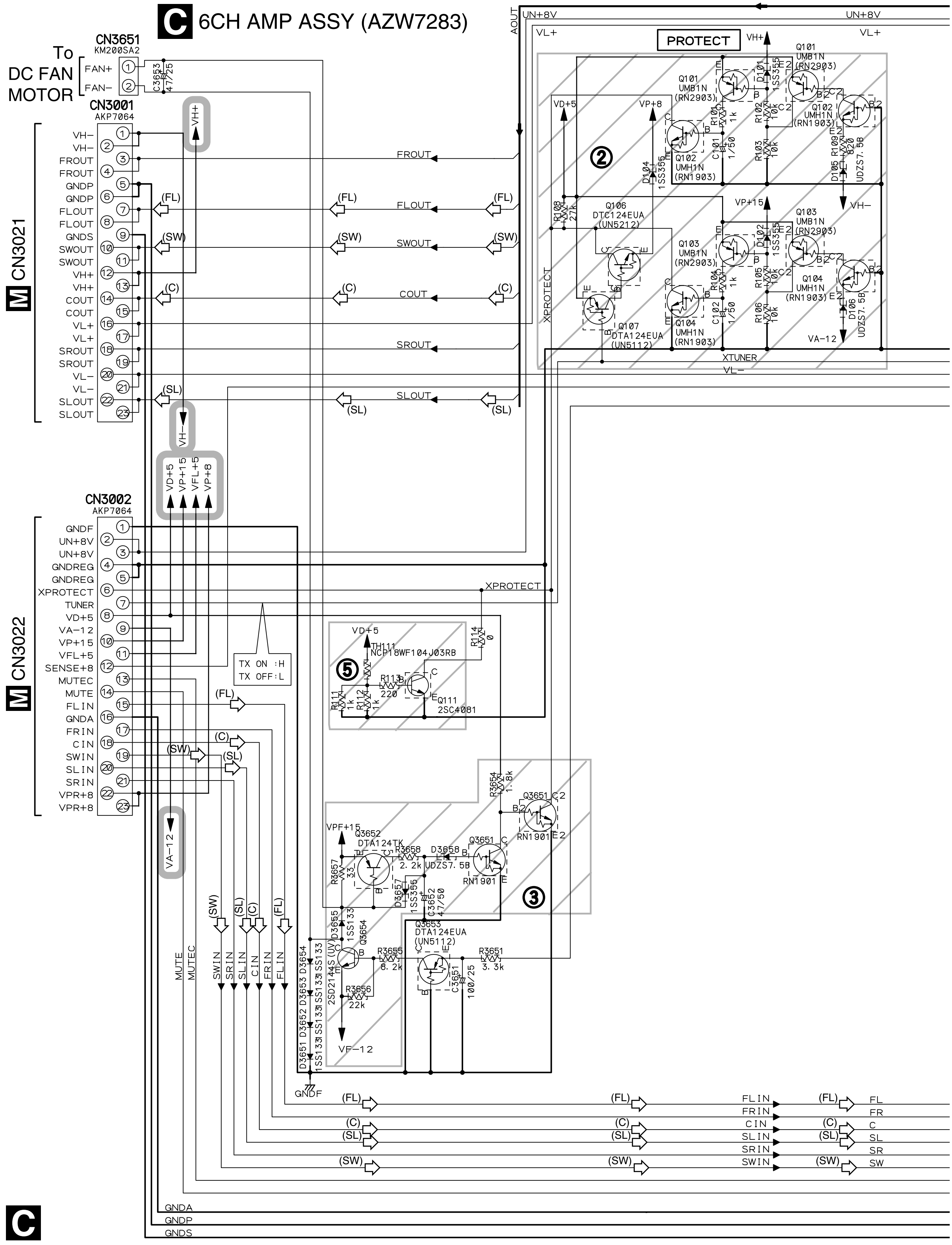

V3D
JTAG
TP5 TP4 TP3 TP2 TP1
R8534 10k
IEDI
IECK
DSRT
DSSS
CLK
DATA
DSDO
DSRQ
V3D
V38
L8701 QTL1013
C8701 10/16
C8702 YB 0.1
C8703 CH 470p
IC8701
TC74LVX244FT
5V→3V
Level shifter
GNDD
R8502 100
R8501 100
R8503 100
C8501 stby
C8502 stby
C8503 stby
R8555 0
R8532 47k
R8504 4.7k
B 1/2 MD
R8506 100 RAB4C101J
FDTO
SDTO
CDTO
BDTO
FDTI
R8505 10k
R8557 47
R8511 47
R8512 47
R8513 47
R8514 47
R8542 0
R8543 0
MCLK
LCKO
BCKI
BCKO
LCKI
SCK
SS
HREQ
SDO0
SDO1
SDO2
SDO3
VCCS
GNDS
SDI1
SDI0
FST
FSR
SCKT
SCKR
HCKT
HCKR
VCCQL
GNDQ
VCCQH
PB12 MUTE
PB11
PB15
PB14
VCCS
GNDS
ADO
ACI
TIO0
PB13
PB10
PB9 96DTS
PB8
PB7
PB6
PB5
BUSY
MISO MOSI TMS TCK TDI TDO SDI1_1 MODA MODB
VCCH GNDH PB3 PB2 PB1 PB0 RESET VCCP
1394 LSSN ADMD
PB4
R8515 47k
R8516 4.7k
R8517 10k
R8518 4.7k
R8519 47k
C8507 470p CH
C8509 470p CH
C8511 470p CH
R8558 47k
C8512 470p CH
C8513 0.1 YB
R8520 100
R8521 100
R8522 100
C8514 0.033 YB
C8555 1000p YB
C8517 YB 0.01
R8526 100
V5D1
V56
L8702 QTL1013
C8704 10/16
C8705 YB 0.1
C8706 CH 470p
IC8702
TC74VHCT244AFT
3V→5V
Level shifter
R8705 330
R8707 330
R8706 330
R8708 330
R8703 330
R8704 330
R8701 330
R8702 330
IEDI IECK DSMD MODC IEIT IEDO
B 1/2 IE
DSDO DRDO DSRQ ERR
B 1/2
MC
1394
LSSN
IECK IERT IEDI
R8811 100k
R8812 100k
R8813 100k
MUTE MODC DATA CLK DSRT DSSS DSMD DRCS DRRT XTL0 LSSN
R8810 100k
R8801 100k
R8802 100k
R8803 100k
R8804 100k
R8805 100k
R8806 100k
R8807 100k
R8808 100k
R8809 0
GNDD
MUTE OUT
MUTE
MODC
DEC MUTE
DSP DI
DSP DO
DSP CK
DSP RST
DSP SS
BUSY
DSP HREQ
DSP MODE
DIR DO
DIR CS
DIR RST
DIR ERR
XTL0
LSSN
GNDD
CN8011
AKP7073
N CN5623
Q8503 UN5112
D8501 1SS355
V3D
Q8504 (2/2) UMD2N
Q8504 (1/2) UMD2N
D8502 DAP202K
D8503 DAP202K
R8538 1M
R8547 1M
R8548 10k
R8549 1M
MUTE
GNDD
B 2/2

(AD) : AUDIO DATA SIGNAL ROUTE

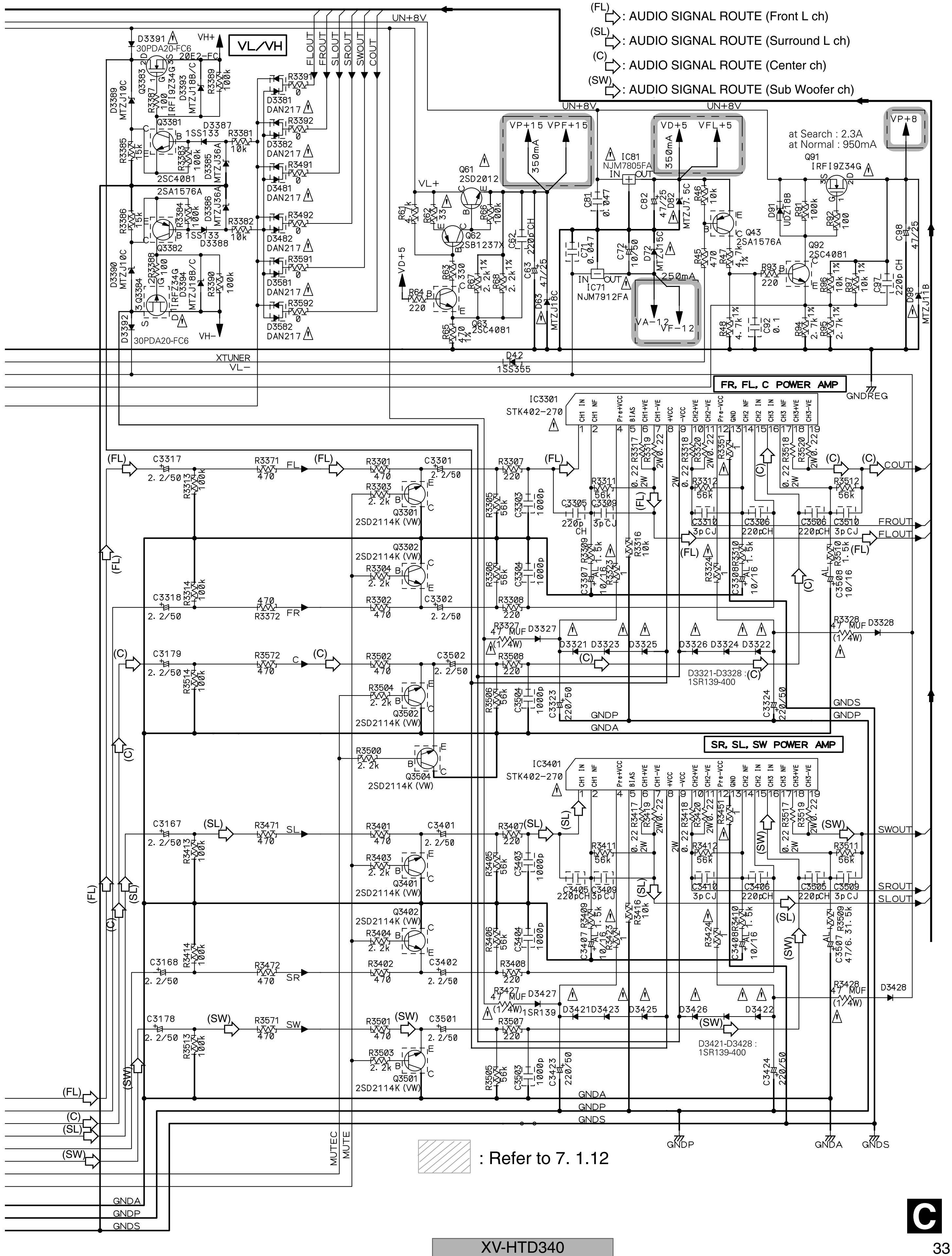


V11
V1R8
V36
V3D
L8501
ATL7002
C8546
100/16
L8502
ATL7002
C8547
100/16
R8531
0
R8533
0
C8544
C8542
C8540
C8538
0.1
YB
C8545
C8543
C8541
C8539
470p
CH
GNDD
MODC
MODD
D23
D22
D21
GNDD
VCCD
D20
GNDQ
VCCQL
D19
D18
D17
D16
D15
GNDD
VCCD
D14
D13
D12
D11
D10
D9
GNDD
VCCD
D8
D7
D6
D5
D4
D3
VCCD
D2
D1
D0
A17
A16
A15
GNDA
VCCQH
A14
A13
A12
VCCQL
GNDQ
A11
A10
GNDA
VCCA
A9
A8
A7
A6
GNDA
VCCA
A5
A4
A3
A2
GNDA
VCCA
A1
C8536
C8537
C8534
C8535
C8532
C8533
C8530
C8531
C8528
C8529
C8526
C8527
IC8501
DSPD56367PV150 (AX6)
DSP
PCAP
GNDP
SDI0_1
VCCQH
FST_1
AA2
CAS
SCKT_1
GNDQ
EXTAL
VCCQL
VCCC
GNDC
FSR_1
SCKR_1
PINIT
TA
BR
BB
VCCC
GNDC
WR
RD
AA1
AA0
BG
A0
C8515
470p
CH
C8516
1
YB
R8552
0
C8518
470p
CH
C8520
C8521
C8522
C8523
0.1
R8528
47k
R8529
47k
C8524
C8525
R8530
47k
WR
RD
AA1
AA0
RD
R8606
0
WR
R8608
0
R8524 47
V37
L8504
QTL1013
C8554
0.01
YB
C8550
YB 0.1
C8551
CH470p
IC8502(2/3) IC8502(1/3)
TC7WU04FU TC7WU04FU
R8539
100
R8541
1M
R8540
470
X8501
VSS1171
20MHz
C8548
CH8p
C8549
CH8p
IC8502(3/3)
TC7WU04FU
GNDD

3.8 6CH AMP ASSY

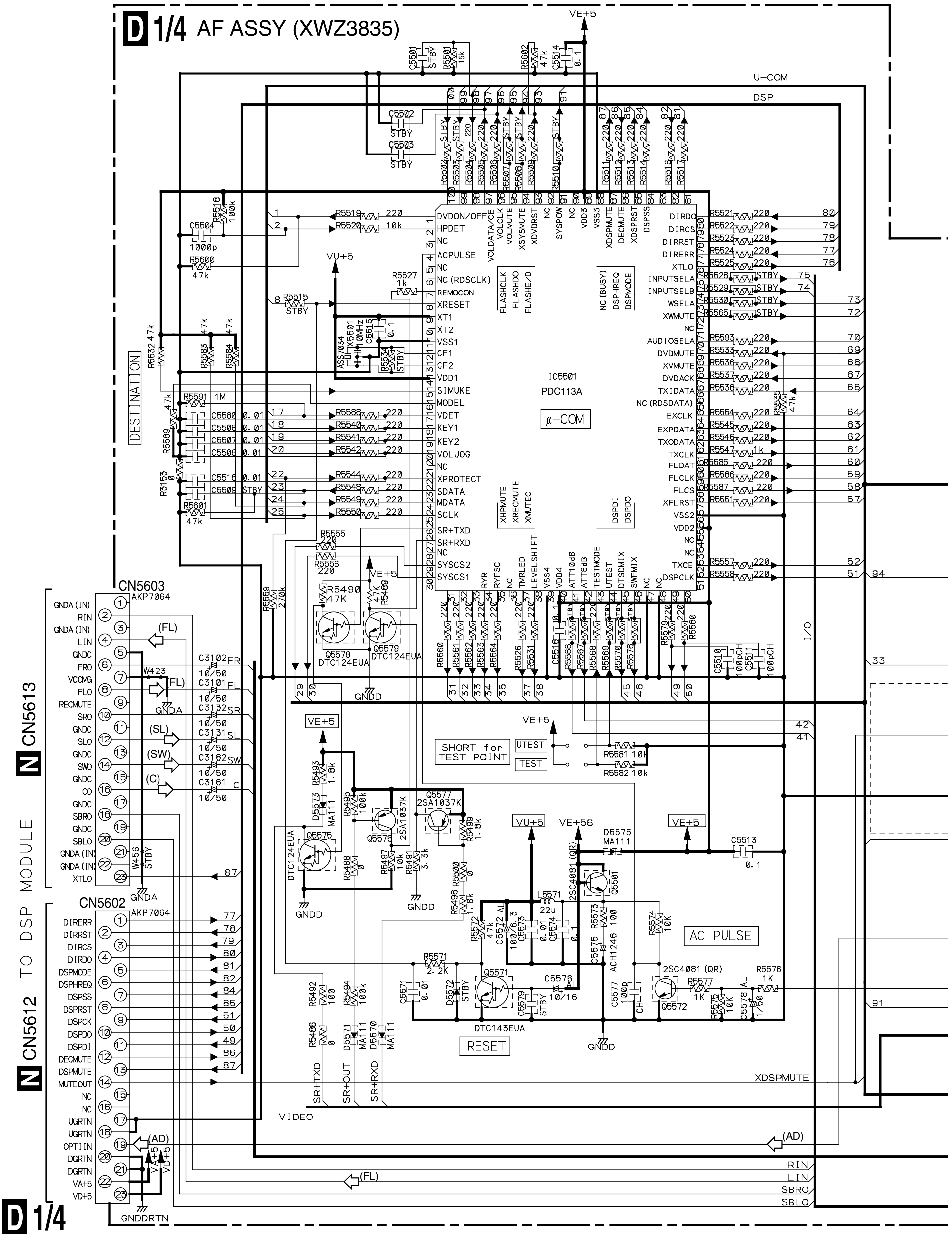

C
6CH AMP ASSY (AZW7283)
To DC FAN MOTOR
CN3651 KM200SA2
FAN+
FAN−
C3653 47/25
CN3001 AKP7064
M CN3021
VH−
VH−
FROUT
FROUT
GNDP
GNDP
FLOUT
FLOUT
GNDS
SWOUT
SWOUT
VH+
VH+
COUT
COUT
VL+
VL+
SROUT
SROUT
VL−
VL−
SLOUT
SLOUT
CN3002 AKP7064
M CN3022
GNDF
UN+8V
UN+8V
GNDREG
GNDREG
XPROTECT
TUNER
VD+5
VA−12
VP+15
VFL+5
SENSE+8
MUTEC
MUTE
FLIN
GNDA
FRIN
CIN
SWIN
SLIN
SRIN
VPR+8
VPR+8
VD+5 VP+15 VFL+5 VP+8
VA−12
TX ON :H
TX OFF:L
AOUT
UN+8V
VL+
PROTECT
VH+
②
VD+5
VP+8
Q101 UMB1N (RN2903)
Q102 UMH1N (RN1903)
D101 1SS355
R101 1k
R102 10k
R103 10k
C101 1/50
D104 1SS355
R109 820
D105 UDZS7.5B
VP+15
VH−
Q106 DTC124EUA (UN5212)
R108 27k
Q103 UMB1N (RN2903)
Q104 UMH1N (RN1903)
D102 1SS355
R104 1k
R105 10k
R106 10k
C102 1/50
D106 UDZS7.5B
Q107 DTA124EUA (UN5112)
XPROTECT
VA−12
XTUNER
VL−
FROUT FLOUT SWOUT COUT SROUT SLOUT
(FL) (SW) (C) (SL)
⑤
VD+5
TH111 NCP18WF104J03RB
R111 1k
R112 1k
R113 220
Q111 2SC4081
R114 0
③
R3654 1.8k
Q3651 RN1901
VPF+15
Q3652 DTA124TK
R3657 33
R3658 2.2k
D3658 UDZS7.5B
D3657 1SS355
C3652 47/50
D3655 1SS133
Q3654 2SD2144S (UV)
R3655 8.2k
R3656 22k
Q3653 DTA124EUA (UN5112)
C3651 100/25
R3651 3.3k
D3654 D3653 D3652 D3651 1SS133
VF−12
GNDF
MUTE MUTEC SWIN SRIN SLIN CIN FRIN FLIN
FLIN FRIN CIN SLIN SRIN SWIN
FL FR C SL SR SW
GNDA
GNDP
GNDS

(FL) : AUDIO SIGNAL ROUTE (Front L ch)
(SL) : AUDIO SIGNAL ROUTE (Surround L ch)
(C) : AUDIO SIGNAL ROUTE (Center ch)
(SW) : AUDIO SIGNAL ROUTE (Sub Woofer ch)


VL/VH
UN+8V
D3391 30PDA20-FC6
Q3383 IRF9Z34G
D3393 MTZJ18B/C
R3389 100k
20E2-FC
VH+
VH-
D3389 MTZJ10C
D3390 MTZJ10C
D3392 30PDA20-FC6
Q3381 2SC4081
Q3382 2SA1576A
Q3384 IRFZ34G
D3394 MTZJ18B/C
D3387 1SS133
D3388 1SS133
D3385 MTZJ36A
D3386 MTZJ36A
R3381 10k
R3382 10k
R3385 15k
R3386 15k
R3390 100k
FLOUT FROUT SLOUT SROUT SWOUT COUT
R3391 0
D3381 DAN217
R3392 0
D3382 DAN217
R3491 0
D3481 DAN217
R3492 0
D3482 DAN217
R3591 0
D3581 DAN217
R3592 0
D3582 DAN217
XTUNER
VL-
D42 1SS355
VL+
Q61 2SD2012
Q62 2SB1237X
Q63 2SC4081
VD+5
R64 220
R65 470 1%
VP+15 VPF+15
350mA
C62 220p CH
C63 47/25
D63 MTZJ18C
IC81 NJM7805FA
IN OUT
C81 0.047
C82 47/25
D82 MTZJ7.5C
VD+5 VFL+5
IC71 NJM7912FA
C71 0.047
C72 10/50
D72 MTZJ15C
250mA
VA-12 VF-12
Q43 2SA1576A
R45 470
R46 10k
R47 4.7k 1%
R48 4.7k 1%
C92 0.1
at Search : 2.3A
at Normal : 950mA
VP+8
Q91 IRF9Z34G
D91 UDZ18B
R91 100k
R92 100
Q92 2SC4081
R93 220
R94 2.7k 1%
R95 2.7k 1%
R96 10k 1%
R97 10k 1%
C97 220p CH
C98 47/25
D98 MTZJ11B
GNDREG
FR, FL, C POWER AMP
IC3301 STK402-270
CH1 IN CH1 NF Pre+VCC BIAS CH1+VE CH1-VE +VCC -VCC CH2+VE CH2-VE Pre-VCC GND CH2 NF CH2 IN CH3 IN CH3 NF CH3+VE CH3-VE
1 2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
C3317 2.2/50
R3313 100k
R3371 470
FL
R3301 470
C3301 2.2/50
R3303 2.2k
Q3301 2SD2114K (VW)
R3307 220
R3305 56k
C3303 1000p
R3317 0.22 2W
R3319 0.22 2W
R3318 0.22 2W
R3320 0.22 2W
R3351 1
R3311 56k
R3312 56k
C3305 220p CH
C3309 3p CJ
C3310 3p CJ
C3306 220p CH
R3518 0.22 2W
R3520 0.22 2W
R3512 56k
C3506 220p CH
C3510 3p CJ
COUT
FROUT
FLOUT
R3316 10k
Q3302 2SD2114K (VW)
R3304 2.2k
R3306 56k
C3304 1000p
R3309 1.5k AL
C3307 10/16
R3323 1
R3324 1
R3310 1.5k AL
C3308 10/16
R3510 1.5k AL
C3508 10/16
C3318 2.2/50
R3314 100k
R3372 470
FR
R3302 470
C3302 2.2/50
R3308 220
R3327 47 MUF (1/4W)
D3327
D3321 D3323 D3325 D3326 D3324 D3322
R3328 47 MUF (1/4W)
D3328
D3321-D3328 : 1SR139-400
C3179 2.2/50
R3514 100k
R3572 470
C
R3502 470
C3502 2.2/50
R3504 2.2k
Q3502 2SD2114K (VW)
R3508 220
R3506 56k
C3504 1000p
C3323 220/50
C3324 220/50
GNDP
GNDA
GNDS
R3500 2.2k
Q3504 2SD2114K (VW)
SR, SL, SW POWER AMP
IC3401 STK402-270
C3167 2.2/50
R3413 100k
R3471 470
SL
R3401 470
C3401 2.2/50
R3407 220
R3403 2.2k
Q3401 2SD2114K (VW)
R3405 56k
C3403 1000p
R3417 0.22 2W
R3419 0.22 2W
R3418 0.22 2W
R3420 0.22 2W
R3451 1
R3411 56k
R3412 56k
R3517 0.22 2W
R3519 0.22 2W
R3511 56k
SWOUT
C3405 220p CH
C3409 3p CJ
C3410 3p CJ
C3406 220p CH
C3505 220p CH
C3509 3p CJ
SROUT
SLOUT
R3416 10k
Q3402 2SD2114K (VW)
R3404 2.2k
R3406 56k
C3404 1000p
R3409 1.5k AL
C3407 10/16
R3423 1
R3424 1
R3410 1.5k AL
C3408 10/16
R3509 1.5k AL
C3507 47/6.3
C3168 2.2/50
R3414 100k
R3472 470
SR
R3402 470
C3402 2.2/50
R3408 220
R3427 47 MUF (1/4W)
D3427 1SR139
D3421 D3423 D3425 D3426 D3422
R3428 47 MUF (1/4W)
D3428
D3421-D3428 : 1SR139-400
C3178 2.2/50
R3513 100k
R3571 470
SW
R3501 470
C3501 2.2/50
R3503 2.2k
Q3501 2SD2114K (VW)
R3507 220
R3505 56k
C3503 1000p
C3423 220/50
C3424 220/50
(FL) (C) (SL) (SW)
MUTEC MUTE
GNDA
GNDP
GNDS

▨ : Refer to 7. 1.12

3.9 AF ASSY (1/4)



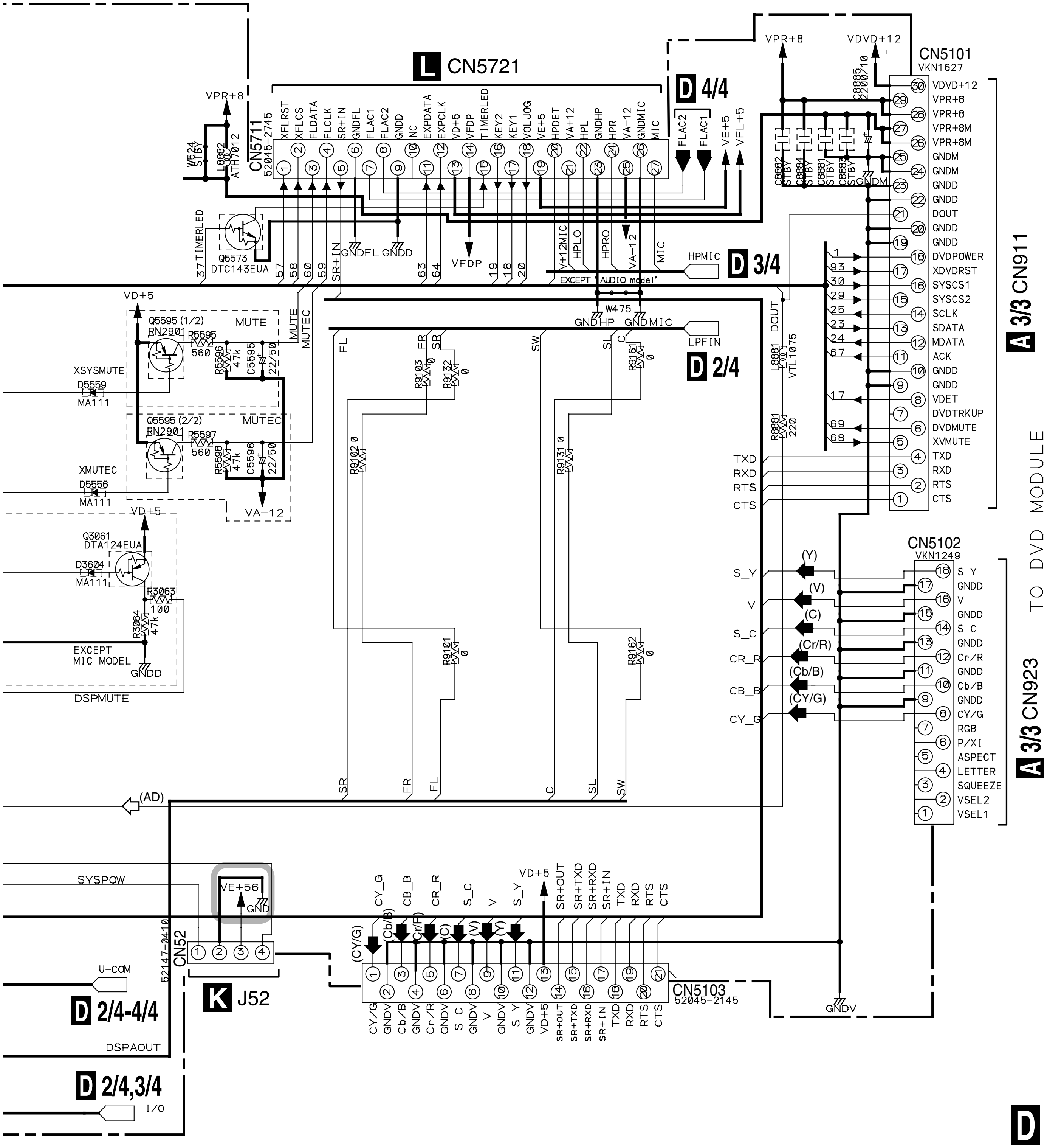
D 1/4 AF ASSY (XWZ3835)
VE+5
U-COM
DSP
IC5501
PDC113A
μ-COM
DVDON/OFF
HPDET
NC
ACPULSE
NC (RDSCLK)
REMOCON
XRESET
XT1
XT2
VSS1
CF1
CF2
VDD1
SIMUKE
MODEL
VDET
KEY1
KEY2
VOLJOG
XPROTECT
SDATA
MDATA
SCLK
SR+TXD
SR+RXD
SYSCS2
SYSCS1
RYR
RYFSC
TMRLED
LEVELSHIFT
VSS4
VDD4
ATT10dB
ATT6dB
TESTMODE
UTEST
DTSDMIX
SWFMIX
DIRDO
DIRCS
DIRRST
DIRERR
XTLO
INPUTSELA
INPUTSELB
WSELA
XWMUTE
AUDIOSELA
DVDMUTE
XVMUTE
DVDACK
TXIDATA
NC (RDSDATA)
EXCLK
EXPDATA
TXODATA
TXCLK
FLDAT
FLCLK
FLCS
XFLRST
VSS2
VDD2
TXCE
DSPCLK
VOLDATA/CE
VOLCLK
VOLMUTE
XSYSMUTE
XDVDRST
SYSPOW
VDD3
VSS3
XDSPMUTE
DECMUTE
XDSPRST
DSPSS
FLASHCLK
FLASHDO
FLASHE/D
NC (BUSY)
DSPHREQ
DSPMODE
XHPMUTE
XRECMUTE
XMUTEC
DSPDI
DSPDO
DESTINATION
X5501 10MHz
ASS7034
VU+5
CN5603 AKP7064
GNDA (IN)
RIN
LIN
GNDC
FRO
VCOMG
FLO
RECMUTE
SRO
SLO
SWO
CO
SBRO
SBLO
XTLO
(FL)
(SL)
(SW)
(C)
W423
W456 STBY
GNDA
N CN5613
TO DSP MODULE
CN5602 AKP7064
DIRERR
DIRRST
DIRCS
DIRDO
DSPMODE
DSPHREQ
DSPSS
DSPRST
DSPCK
DSPDO
DSPDI
DECMUTE
DSPMUTE
MUTEOUT
UGRTN
OPTIIN
DGRTN
VA+5
VD+5
(AD)
GNDDRTN
N CN5612
Q5578 DTC124EUA
Q5579 DTC124EUA
Q5575 DTC124EUA
Q5576 2SA1037K
Q5577 2SA1037K
Q5571 DTC143EUA
Q5501 2SC4081 (QR)
Q5572 2SC4081 (QR)
D5573 MA111
D5575 MA111
D5571 MA111
D5570 MA111
D5572 STBY
L5571 22μ
ACH1246
SHORT for TEST POINT
UTEST
TEST
VE+56
AC PULSE
RESET
GNDD
SR+TXD
SR+OUT
SR+RXD
VIDEO
XDSPMUTE
I/O
RIN
LIN
SBRO
SBLO
D 1/4

(Cr/R) ➡: VIDEO SIGNAL ROUTE (Cr/R)
(CY/G) ➡: VIDEO SIGNAL ROUTE (CY/G)
(Cb/B) ➡: VIDEO SIGNAL ROUTE (Cb/B)
(Y) ➡: S VIDEO SIGNAL ROUTE (Y)
(C) ➡: S VIDEO SIGNAL ROUTE (Y)
(C/V) ➡: S VIDEO SIGNAL ROUTE (C/V)

(AD) ⇨: AUDIO DATA SIGNAL ROUTE
(FL) ⇨: AUDIO SIGNAL ROUTE (Front L ch)
(SL) ⇨: AUDIO SIGNAL ROUTE (Surround L ch)
(C) ⇨: AUDIO SIGNAL ROUTE (Center ch)
(SW) ⇨: AUDIO SIGNAL ROUTE (Sub Woofer ch)

NOTES

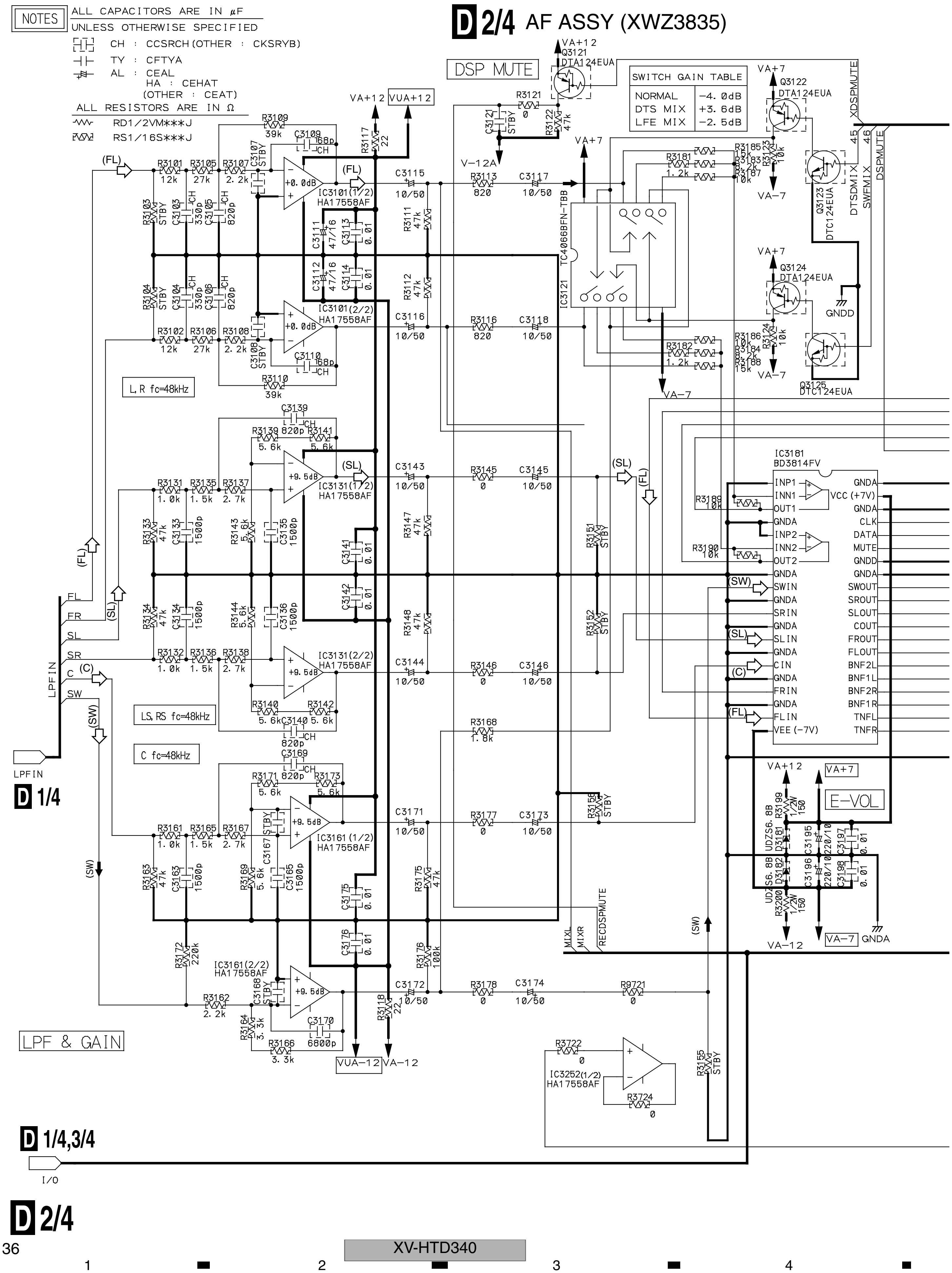
ALL CAPACITORS ARE IN µF
UNLESS OTHERWISE SPECIFIED
CH : CCSRCH
(OTHER : CKSRYB)
AL : CEAL
(OTHER : CEAT)
ALL RESISTORS ARE IN Ω
RS1/16S∗∗∗J
ALL INDUCTORS ARE IN µH
LFEA∗∗∗J



L CN5721
CN5711
52045-2745
XFLRST XFLCS FLDATA FLCLK SR+IN GNDFL FLAC1 FLAC2 GNDD NC EXPDATA EXPCLK VD+5 VFDP TIMERLED KEY2 KEY1 VOLJOG VE+5 HPDET VA+12 HPL GNDHP HPR VA-12 GNDMIC MIC
FLAC2 FLAC1 VE+5 VFL+5
D 4/4
VPR+8
W524 STBY
L8882 ATH7012
TIMERLED
Q5573 DTC143EUA
37 57 58 60 59
SR+IN
GNDFL GNDD
VFDP
63 64 19 18 20
V+12MIC HPLO HPRO VA-12 MIC
HPMIC
D 3/4
EXCEPT "AUDIO model"
W475
GNDHP GNDMIC
LPFIN
D 2/4
VD+5
Q5595 (1/2) RN2901
MUTE
R5595 560
R5596 47k
C5595 22/50
MUTE MUTEC
XSYSMUTE
D5559 MA111
Q5595 (2/2) RN2901
MUTEC
R5597 560
R5598 47k
C5596 22/50
XMUTEC
D5556 MA111
VA-12
VD+5
Q3061 DTA124EUA
D3604 MA111
R3063 100
R3064 47k
EXCEPT MIC MODEL
GNDD
DSPMUTE
FL FR SR SW SL C
R9103 0
R9132 0
R9161 0
R9102 0
R9131 0
R9101 0
R9162 0
SR FR FL C SL SW
DOUT
L8881 VTL1075
R8881 220
(AD)
VPR+8 VDVD+12
C8885 220/10
C8882 STBY C8884 STBY C8881 STBY C8883 STBY
GNDM
CN5101 VKN1627
1 93 30 29 25 23 24 67 17 69 68
VDVD+12 VPR+8 VPR+8 VPR+8M VPR+8M GNDM GNDM GNDD GNDD GNDD DOUT GNDD GNDD DVDPOWER XDVDRST SYSCS1 SYSCS2 SCLK SDATA MDATA ACK GNDD GNDD VDET DVDTRKUP DVDMUTE XVMUTE TXD RXD RTS CTS
TXD RXD RTS CTS
A 3/3 CN911
TO DVD MODULE
CN5102 VKN1249
S_Y V S_C CR_R CB_B CY_G
(Y) (V) (C) (Cr/R) (Cb/B) (CY/G)
S Y GNDD V GNDD S C GNDD Cr/R GNDD Cb/B GNDD CY/G RGB P/XI ASPECT LETTER SQUEEZE VSEL2 VSEL1
A 3/3 CN923
SYSPOW
VE+56
GND
CN52 52147-0410
K J52
U-COM
D 2/4-4/4
DSPAOUT
D 2/4,3/4
I/O
VD+5
CY_G CB_B CR_R S_C V S_Y SR+OUT SR+TXD SR+RXD SR+IN TXD RXD RTS CTS
(CY/G) (Cb/B) (Cr/R) (C) (V) (Y)
CY/G GNDV Cb/B GNDV Cr/R GNDV S C GNDV V GNDV S Y GNDV VD+5 SR+OUT SR+TXD SR+IN TXD RXD RTS CTS
CN5103 52045-2145
GNDV

D 1/4

3.10 AF ASSY (2/4)



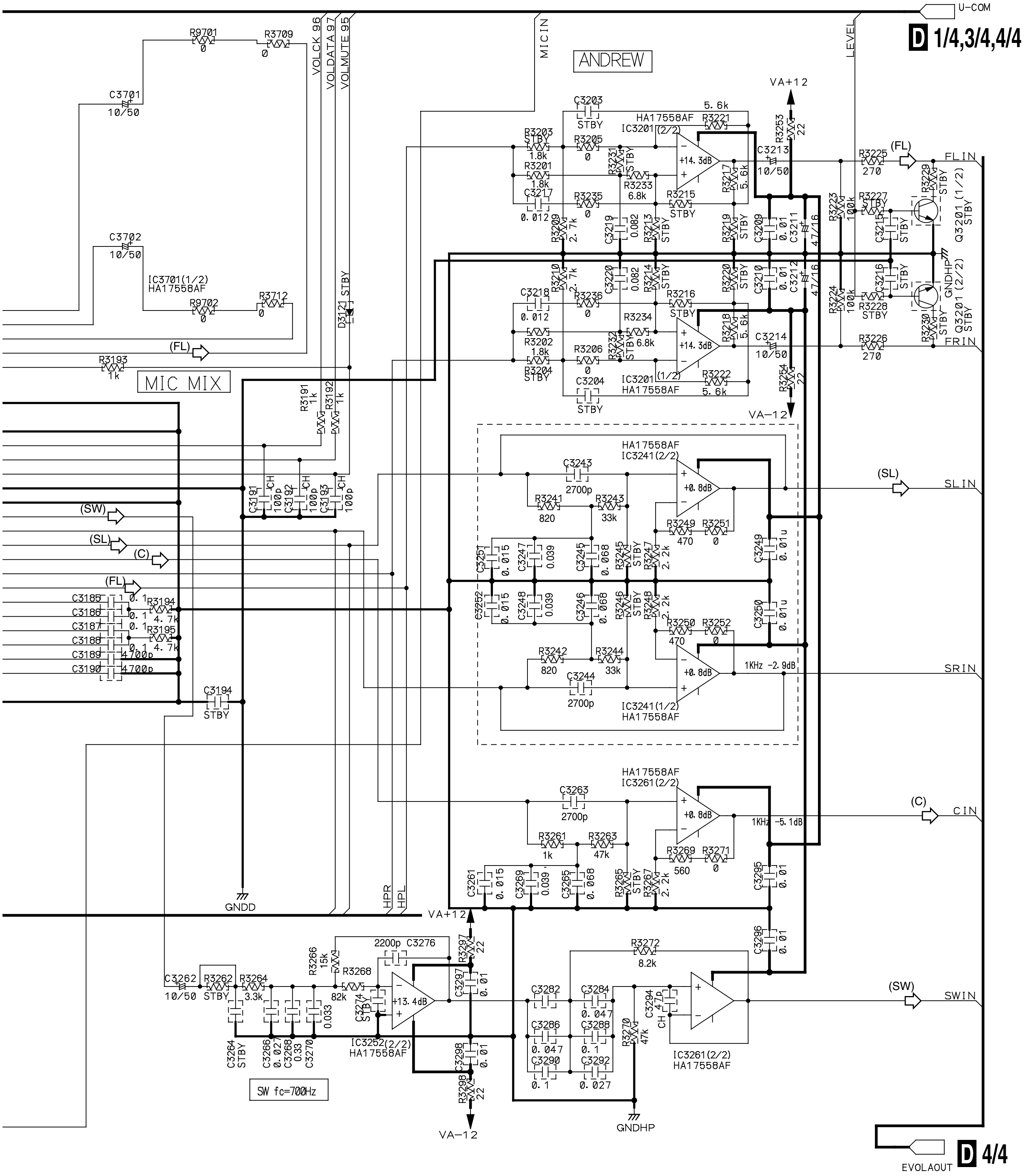
NOTES ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED
CH : CCSRCH (OTHER : CKSRYB)
TY : CFTYA
AL : CEAL
HA : CEHAT
(OTHER : CEAT)
ALL RESISTORS ARE IN Ω
RD1/2VM✱✱✱J
RS1/16S✱✱✱J

D 2/4 AF ASSY (XWZ3835)

SWITCH GAIN TABLE	
NORMAL	−4. 0dB
DTS MIX	+3. 6dB
LFE MIX	−2. 5dB

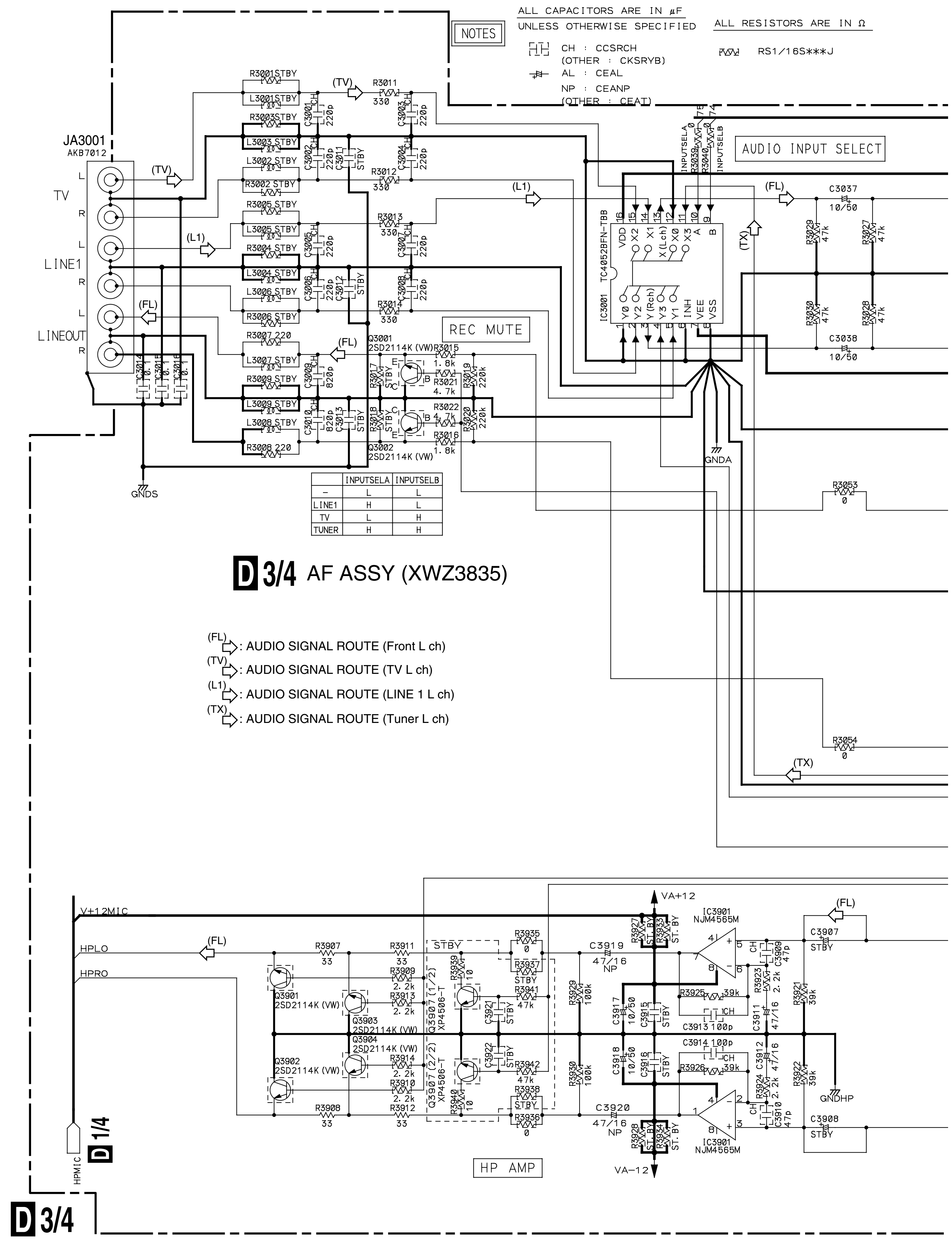
DSP MUTE
VA+12
Q3121
DTA124EUA
R3121
0
C3121
STBY
R3122
47k
V−12A
VA+7
Q3122
DTA124EUA
XDSPMUTE
45
46
R3185 15k
R3183 8.2k
R3187 10k
R3181 1.2k
R3123 10k
VA−7
Q3123
DTC124EUA
DTSDMIX
SWFMIX
DSPMUTE
TC4066BFN-TBB
IC3121
Q3124
DTA124EUA
GNDD
R3186 10k
R3184 8.2k
R3188 15k
R3182 1.2k
R3124 10k
Q3125
DTC124EUA
VA+12
VUA+12
R3109 39k
C3109 68p CH
R3117 22
(FL)
R3101 12k
R3105 27k
R3107 2.2k
C3107 STBY
+0.0dB
IC3101(1/2) HA17558AF
C3115 10/50
R3113 820
C3117 10/50
R3103 STBY
C3103 330p CH
C3105 820p CH
C3111 47/16
C3113 0.01
R3111 47k
C3112 47/16
C3114 0.01
R3112 47k
R3104 STBY
C3104 330p CH
C3106 820p CH
IC3101(2/2) HA17558AF
C3116 10/50
R3116 820
C3118 10/50
R3102 12k
R3106 27k
R3108 2.2k
C3108 STBY
C3110 68p CH
R3110 39k
L, R fc=48kHz
C3139 820p CH
R3139 5.6k
R3141 5.6k
(SL)
+9.5dB
IC3131(1/2) HA17558AF
C3143 10/50
R3145 0
C3145 10/50
R3131 1.0k
R3135 1.5k
R3137 2.7k
R3133 47k
C3133 1500p
R3143 5.6k
C3135 1500p
R3147 47k
C3141 0.01
C3142 0.01
R3148 47k
R3151 STBY
R3152 STBY
R3134 47k
C3134 1500p
R3144 5.6k
C3136 1500p
IC3131(2/2) HA17558AF
C3144 10/50
R3146 0
C3146 10/50
R3132 1.0k
R3136 1.5k
R3138 2.7k
R3140 5.6k
R3142 5.6k
C3140 820p CH
LS, RS fc=48kHz
C fc=48kHz
R3168 1.8k
C3169 820p CH
R3171 5.6k
R3173 5.6k
IC3161(1/2) HA17558AF
C3171 10/50
R3177 0
C3173 10/50
R3156 STBY
R3161 1.0k
R3165 1.5k
R3167 2.7k
C3167 STBY
R3163 47k
C3163 1500p
R3169 5.6k
C3165 1500p
C3175 0.01
R3175 47k
C3176 0.01
R3176 100k
R3172 220k
IC3161(2/2) HA17558AF
C3168 STBY
R3162 2.2k
C3172 10/50
R3178 0
C3174 10/50
R9721 0
R3118 22
R3164 3.3k
R3166 3.3k
C3170 6800p
VUA−12
VA−12
LPF & GAIN
LPFIN
FL
FR
SL
SR
C
SW
(C)
(SW)
D 1/4
MIXL
MIXR
RECDSPMUTE
R3722 0
IC3252(1/2) HA17558AF
R3724 0
R3155 STBY
IC3181
BD3814FV
INP1
INN1
OUT1
GNDA
INP2
INN2
OUT2
SWIN
SRIN
SLIN
CIN
FRIN
FLIN
VEE (−7V)
VCC (+7V)
CLK
DATA
MUTE
GNDD
SWOUT
SROUT
SLOUT
COUT
FROUT
FLOUT
BNF2L
BNF1L
BNF2R
BNF1R
TNFL
TNFR
R3189 10k
R3190 10k
E-VOL
R3199 1/2W 150
D3181 UDZS6.8B
C3195 220/10
C3197 0.01
D3182 UDZS6.8B
C3196 220/10
C3198 0.01
R3200 1/2W 150
VA−7
GNDA
D 1/4,3/4
I/O
D 2/4

(FL) : AUDIO SIGNAL ROUTE (Front L ch)
(SL) : AUDIO SIGNAL ROUTE (Surround L ch)
(C) : AUDIO SIGNAL ROUTE (Center ch)
(SW) : AUDIO SIGNAL ROUTE (Sub Woofer ch)


U-COM
D 1/4,3/4,4/4
ANDREW
MIC MIX
VOLCK 96
VOLDATA 97
VOLMUTE 95
MICIN
LEVEL
VA+12
VA−12
HA17558AF
IC3201(2/2)
IC3201(1/2)
IC3241(2/2)
IC3241(1/2)
IC3261(2/2)
IC3252(2/2)
IC3701(1/2)
+14.3dB
+0.8dB
+13.4dB
1KHz −2.9dB
1KHz −5.1dB
Q3201(1/2) STBY
Q3201(2/2) STBY
GNDHP
GNDD
HPR
HPL
FLIN
FRIN
SLIN
SRIN
CIN
SWIN
(FL)
(SL)
(C)
(SW)
SW fc=700Hz
D 4/4
EVOLAOUT
R9701 0
R3709 0
R9702 0
R3712 0
C3701 10/50
C3702 10/50
D3121 STBY
R3193 1k
R3191 1k
R3192 1k
C3191 CH 100p
C3192 CH 100p
C3193 CH 100p
C3185 0.1
C3186 0.1
C3187 0.1
C3188 0.1
C3189 4700p
C3190 4700p
R3194 4.7k
R3195 4.7k
C3194 STBY
C3203 STBY
C3204 STBY
R3221 5.6k
R3222 5.6k
R3203 STBY
R3204 STBY
R3205 0
R3206 0
R3201 1.8k
R3202 1.8k
C3217 0.012
C3218 0.012
R3231 STBY
R3232 STBY
R3233 6.8k
R3234 6.8k
R3235 0
R3236 0
R3215 STBY
R3216 STBY
R3217 5.6k
R3218 5.6k
R3209 2.7k
R3210 2.7k
C3219 0.082
C3220 0.082
R3213 STBY
R3214 STBY
R3219 STBY
R3220 STBY
C3209 0.01
C3210 0.01
C3211 47/16
C3212 47/16
R3253 22
R3254 22
C3213 10/50
C3214 10/50
R3225 270
R3226 270
R3223 100k
R3224 100k
R3227 STBY
R3228 STBY
C3215 STBY
C3216 STBY
R3229 STBY
R3230 STBY
C3243 2700p
C3244 2700p
R3241 820
R3242 820
R3243 33k
R3244 33k
R3249 470
R3250 470
R3251 0
R3252 0
C3251 0.015
C3252 0.015
C3247 0.039
C3248 0.039
C3245 0.068
C3246 0.068
R3245 STBY
R3246 STBY
R3247 2.2k
R3248 2.2k
C3249 0.01u
C3250 0.01u
C3263 2700p
R3261 1k
R3263 47k
R3269 560
R3271 0
C3261 0.015
C3269 0.039
C3265 0.068
R3265 STBY
R3267 2.2k
C3295 0.01
C3296 0.01
C3262 10/50
R3262 STBY
R3264 3.3k
R3266 15k
R3268 82k
C3276 2200p
C3274 STBY
C3264 STBY
C3266 0.027
C3268 0.33
C3270 0.033
R3297 22
C3297 0.01
C3298 0.01
R3298 22
R3272 8.2k
C3282
C3284 0.047
C3286 0.047
C3288 0.1
C3290 0.1
C3292 0.027
R3270 47k
C3294 CH 47p

D 2/4

3.11 AF ASSY(3/4)

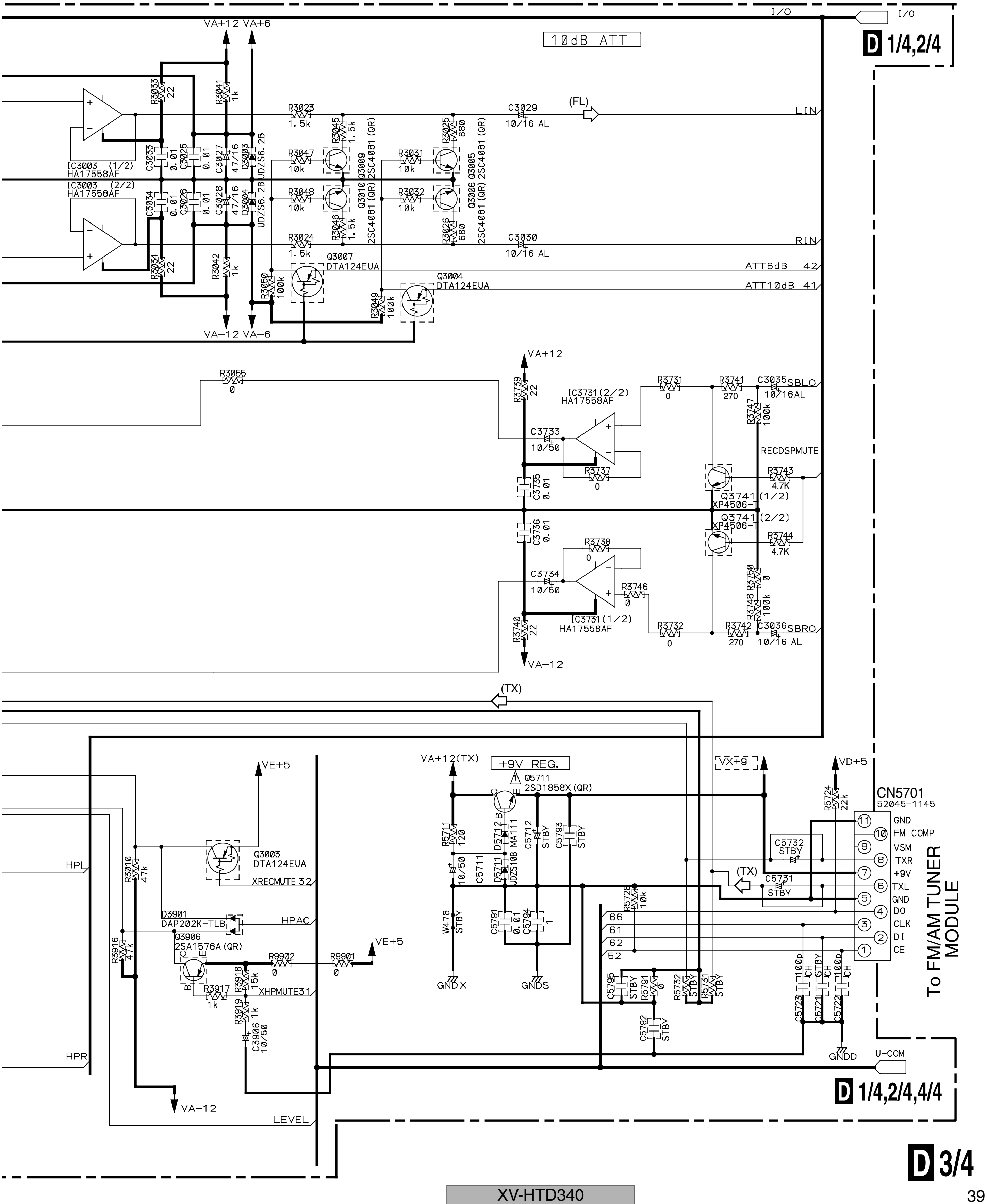

NOTES
ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED
CH : CCSRCH
(OTHER : CKSRYB)
AL : CEAL
NP : CEANP
(OTHER : CEAT)
ALL RESISTORS ARE IN Ω
RS1/16S***J
JA3001
AKB7012
TV
LINE1
LINEOUT
L
R
AUDIO INPUT SELECT
IC3001
TC4052BFN-TBB
VDD X2 X1 X(Lch) X0 X3 A B
Y0 Y2 Y(Rch) Y3 Y1 INH VEE VSS
INPUTSELA
INPUTSELB
R3039
R3040
REC MUTE
Q3001
2SD2114K (VW)
Q3002
2SD2114K (VW)
R3015 1.8k
R3016 1.8k
R3021 4.7k
R3022 4.7k
R3019 220k
R3020 220k
R3011 330
R3012 330
R3013 330
R3014 330
C3037 10/50
C3038 10/50
R3027 47k
R3028 47k
R3029 47k
R3030 47k
R3053 0
R3054 0
GNDA
GNDS
(TV)
(L1)
(FL)
(TX)
V+12MIC
HPLO
HPRO
HPMIC
D 1/4
HP AMP
IC3901
NJM4565M
VA+12
VA-12
Q3901 2SD2114K (VW)
Q3902 2SD2114K (VW)
Q3903 2SD2114K (VW)
Q3904 2SD2114K (VW)
Q3907 (1/2) XP4506-T
Q3907 (2/2) XP4506-T
STBY
R3907 33
R3908 33
R3911 33
R3912 33
R3909 2.2k
R3910 2.2k
R3913 2.2k
R3914 2.2k
R3935 0
R3936 0
R3937 STBY
R3938 STBY
R3939 10
R3940 10
R3941 47k
R3942 47k
R3929 100k
R3930 100k
C3919 47/16 NP
C3920 47/16 NP
C3917 10/50
C3918 10/50
C3911 47/16
C3912 47/16
R3925 39k
R3926 39k
C3913 100p
C3914 100p
R3923 2.2k
R3924 2.2k
C3909 47p
C3910 47p
R3921 39k
R3922 39k
C3907 STBY
C3908 STBY
GNDHP
ST.BY

	INPUTSELA	INPUTSELB
–	L	L
LINE1	H	L
TV	L	H
TUNER	H	H

D 3/4 AF ASSY (XWZ3835)

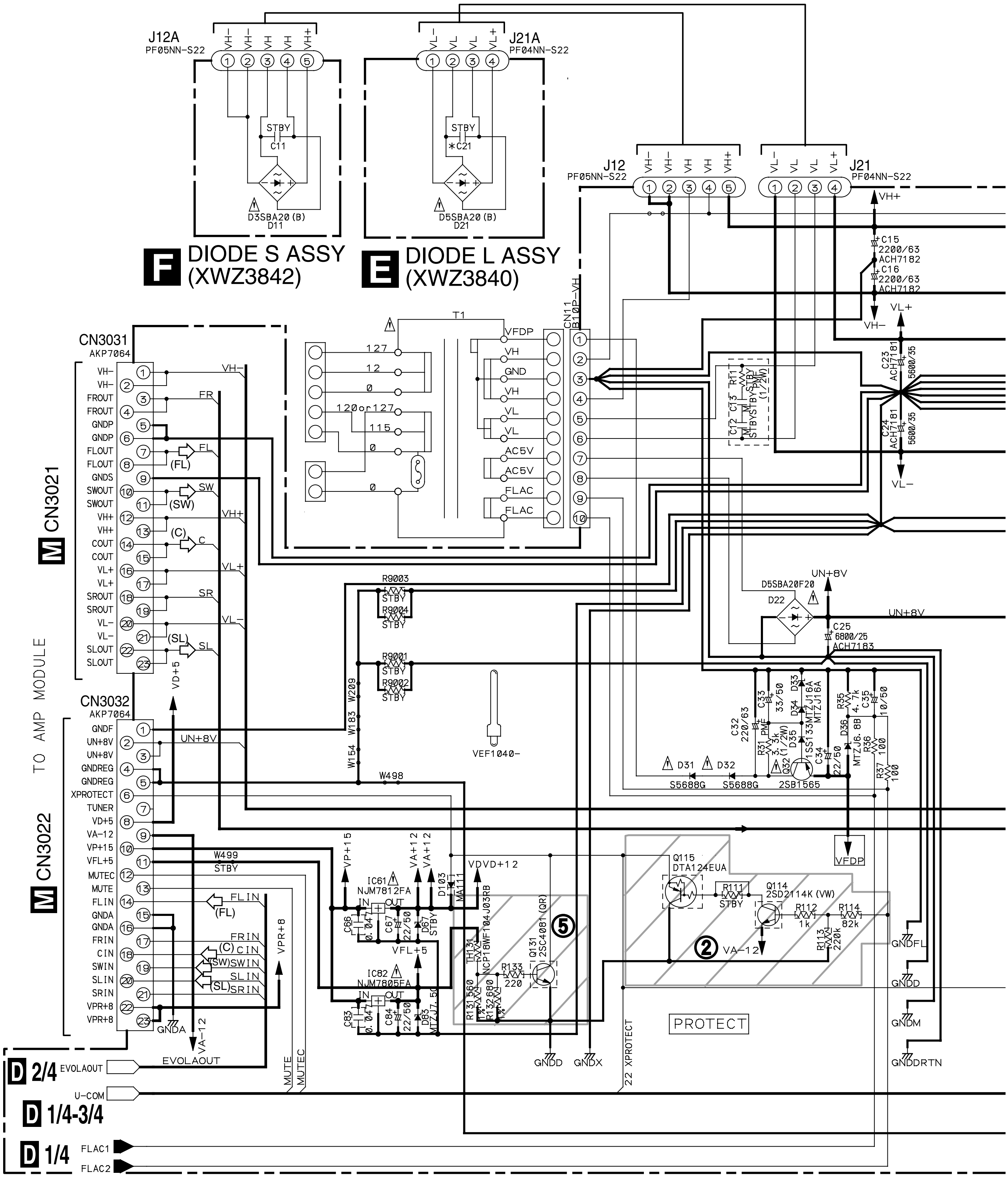
(FL) ⇨ : AUDIO SIGNAL ROUTE (Front L ch)
(TV) ⇨ : AUDIO SIGNAL ROUTE (TV L ch)
(L1) ⇨ : AUDIO SIGNAL ROUTE (LINE 1 L ch)
(TX) ⇨ : AUDIO SIGNAL ROUTE (Tuner L ch)

D 3/4


I/O
D 1/4,2/4
10dB ATT
VA+12 VA+6
R3033 22
R3041 1k
R3023 1.5k
R3045 1.5k
R3025 680
C3029 10/16 AL
(FL)
LIN
IC3003 (1/2) HA17558AF
IC3003 (2/2) HA17558AF
C3033 0.01
C3025 0.01
C3027 47/16
D3003 UDZS6.2B
R3047 10k
Q3009 2SC4081(QR)
R3031 10k
Q3005 2SC4081(QR)
C3034 0.01
C3026 0.01
C3028 47/16
D3004 UDZS6.2B
R3048 10k
Q3010 2SC4081(QR)
R3032 10k
Q3006 2SC4081(QR)
R3046 1.5k
R3026 680
R3024 1.5k
C3030 10/16 AL
RIN
Q3007 DTA124EUA
ATT6dB 42
Q3004 DTA124EUA
ATT10dB 41
R3034 22
R3042 1k
R3050 100k
R3049 100k
VA-12 VA-6
VA+12
R3055 0
R3739 22
IC3731(2/2) HA17558AF
R3731 0
R3741 270
C3035 10/16AL
SBLO
R3747 100k
C3733 10/50
R3737 0
RECDSPMUTE
R3743 4.7K
C3735 0.01
Q3741(1/2) XP4506-T
Q3741(2/2) XP4506-T
C3736 0.01
R3744 4.7K
R3738 0
C3734 10/50
R3746 0
R3750 0
R3748 100k
IC3731(1/2) HA17558AF
R3740 22
R3732 0
R3742 270
C3036 10/16 AL
SBRO
VA-12
(TX)
VE+5
VA+12(TX)
+9V REG.
VX+9
VD+5
Q5711 2SD1858X(QR)
R5711 120
D5712 MA111
C5712 STBY
C5793 STBY
R5724 22k
CN5701 52045-1145
C5711 10/50
D5711 UDZS10B
Q3003 DTA124EUA
HPL
R3010 4.7k
XRECMUTE 32
C5732 STBY
(TX)
C5731 STBY
R5728 10k
D3901 DAP202K-TLB
HPAC
Q3906 2SA1576A(QR)
W478 STBY
C5791 0.01
C5794 1
66
61
62
52
R3916 4.7k
R9902 0
R9901 0
VE+5
R3918 15k
R3917 1k
XHPMUTE31
GNDX
GNDS
C5795 STBY
R5791 0
R5732 STBY
R5731 STBY
C5723 100p CH
C5721 STBY
C5722 100p CH
R3919 1k
C3906 10/50
C5792 STBY
GNDD
U-COM
HPR
VA-12
LEVEL
D 1/4,2/4,4/4
11 GND
10 FM COMP
9 VSM
8 TXR
7 +9V
6 TXL
5 GND
4 DO
3 CLK
2 DI
1 CE
To FM/AM TUNER MODULE
A
B
C
D
E
F

D 3/4

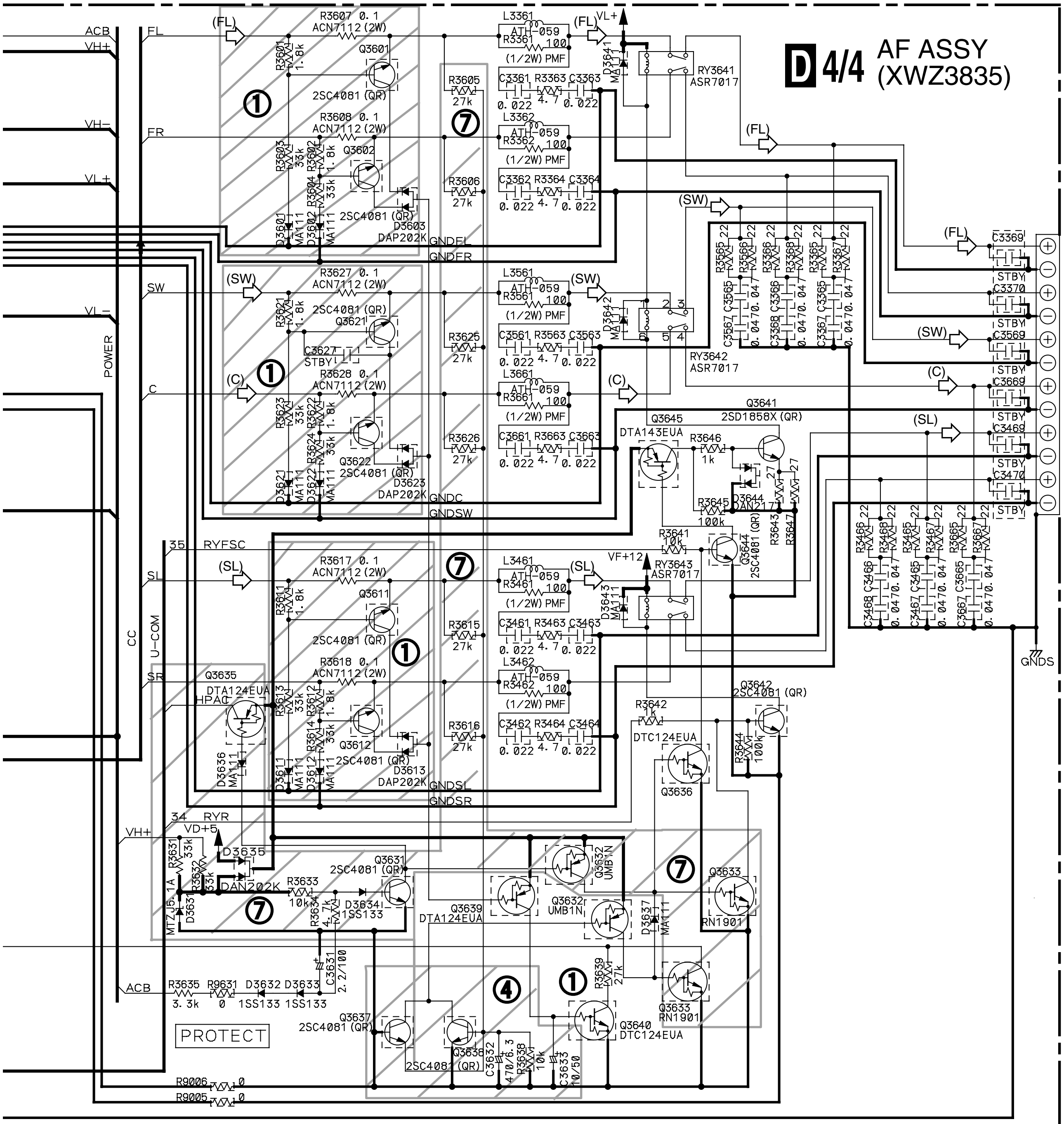
3.12 AF(4/4), DIODE L and DIODE S ASSYS


A
B
C
D
E
F
J12A
PF05NN-S22
VH− VH− VH VH VH+
STBY
C11
D3SBA20(B)
D11
J21A
PF04NN-S22
VL− VL VL VL+
STBY
∗C21
D5SBA20(B)
D21
F DIODE S ASSY (XWZ3842)
E DIODE L ASSY (XWZ3840)
J12
PF05NN-S22
J21
PF04NN-S22
VH+
C15 2200/63 ACH7182
C16 2200/63 ACH7182
VH−
VL+
C23 ACH7181 5600/35
C24 ACH7181 5600/35
VL−
T1
127
12
0
120or127
115
0
0
VFDP
VH
GND
VH
VL
VL
AC5V
AC5V
FLAC
FLAC
CN11 B10P-VH
C12 C13 R11
STBY STBY STBY
PMF (1/2W)
CN3031
AKP7064
VH− VH− FROUT FROUT GNDP GNDP FLOUT FLOUT GNDS SWOUT SWOUT VH+ VH+ COUT COUT VL+ VL+ SROUT SROUT VL− VL− SLOUT SLOUT
FR FL (FL) SW (SW) (C) C SR (SL) SL
M CN3021
TO AMP MODULE
VD+5
CN3032
AKP7064
GNDF UN+8V UN+8V GNDREG GNDREG XPROTECT TUNER VD+5 VA−12 VP+15 VFL+5 MUTEC MUTE FLIN GNDA GNDA FRIN CIN SWIN SLIN SRIN VPR+8 VPR+8
M CN3022
UN+8V
W499 STBY
FLIN (FL) FRIN (C) CIN (SW) SWIN SLIN (SL) SRIN
VPR+8
GNDA
VA−12
R9003 STBY
R9004 STBY
R9001 STBY
R9002 STBY
W209 W183 W154
W498
VEF1040−
D5SBA20F20
D22
UN+8V
C25 6800/25 ACH7183
C32 220/63
C33 33/50
D33 D34 MTZJ16A MTZJ16A
D35 1SS133
R31 3.3k (1/2W) PMF
Q32
C34 22/50
D36 MTZJ6.8B
R35 4.7k
C35 10/50
R36 100
R37 100
D31 D32
S5688G S5688G 2SB1565
VFDP
VP+15
VA+12 VA+12
IC61 NJM7812FA
IN OUT
C66 0.047
C67 22/50
D67 STBY
D103 MA111
VDVD+12
TH131 NCP18WF104J03RB
Q131 2SC4081 (QR)
⑤
R133 220
R131 560
R132 680
VFL+5
IC82 NJM7805FA
C83 0.047
C84 22/50
D83 MTZJ7.5C
Q115 DTA124EUA
R111 STBY
Q114 2SD2114K (VW)
R112 1k
R114 82k
R113 220k
② VA−12
PROTECT
GNDFL
GNDD
GNDM
GNDDRTN
GNDD GNDX
22 XPROTECT
MUTE MUTEC
D 2/4 EVOLAOUT
EVOLAOUT
D 1/4-3/4 U-COM
D 1/4 FLAC1 FLAC2

D 4/4 E F

(FL)⇨ : AUDIO SIGNAL ROUTE (Front L ch)
(SL)⇨ : AUDIO SIGNAL ROUTE (Surround L ch)
(C)⇨ : AUDIO SIGNAL ROUTE (Center ch)
(SW)⇨ : AUDIO SIGNAL ROUTE (Sub Woofer ch)

▨ : Refer to 7. 1.12


D 4/4 AF ASSY (XWZ3835)
ACB
VH+
VH−
VL+
VL−
FL
FR
SW
C
SL
SR
POWER
CC
U-COM
35 RYFSC
34 RYR
ACB
R3607 0.1 ACN7112 (2W)
R3608 0.1 ACN7112 (2W)
R3601 1.8k
R3603 33k
R3602 1.8k
R3604 33k
Q3601
Q3602
2SC4081 (QR)
D3601 MA111
D3602 MA111
D3603 DAP202K
GNDFL
GNDFR
R3627 0.1 ACN7112 (2W)
R3621 1.8k
Q3621 2SC4081 (QR)
C3627 STBY
R3628 0.1 ACN7112 (2W)
R3623 33k
R3622 1.8k
R3624 33k
Q3622 2SC4081 (QR)
D3621 MA111
D3622 MA111
D3623 DAP202K
GNDC
GNDSW
R3617 0.1 ACN7112 (2W)
R3611 1.8k
Q3611 2SC4081 (QR)
R3618 0.1 ACN7112 (2W)
R3613 33k
R3612 1.8k
R3614 33k
Q3612 2SC4081 (QR)
D3611 MA111
D3612 MA111
D3613 DAP202K
GNDSL
GNDSR
R3605 27k
R3606 27k
R3625 27k
R3626 27k
R3615 27k
R3616 27k
L3361 ATH-059
R3361 100 (1/2W) PMF
C3361 0.022 R3363 4.7 C3363 0.022
L3362 ATH-059
R3362 100 (1/2W) PMF
C3362 0.022 R3364 4.7 C3364 0.022
L3561 ATH-059
R3561 100 (1/2W) PMF
C3561 0.022 R3563 4.7 C3563 0.022
L3661 ATH-059
R3661 100 (1/2W) PMF
C3661 0.022 R3663 4.7 C3663 0.022
L3461 ATH-059
R3461 100 (1/2W) PMF
C3461 0.022 R3463 4.7 C3463 0.022
L3462 ATH-059
R3462 100 (1/2W) PMF
C3462 0.022 R3464 4.7 C3464 0.022
VL+
D3641 MA111
RY3641 ASR7017
D3642 MA111
RY3642 ASR7017
VF+12
D3643 MA111
RY3643 ASR7017
R3565 22 R3566 22 R3366 22 R3368 22 R3365 22 R3367 22
C3567 0.047 C3565 0.047 C3368 0.047 C3366 0.047 C3367 0.047 C3365 0.047
R3466 22 R3468 22 R3465 22 R3467 22 R3665 22 R3667 22
C3468 0.047 C3466 0.047 C3467 0.047 C3465 0.047 C3667 0.047 C3665 0.047
CN3301 AKE7097
C3369 STBY
C3370 STBY
C3569 STBY
C3669 STBY
C3469 STBY
C3470 STBY
FL FR SW C SL SR
6ch SPEAKER OUT
GNDS
Q3641 2SD1858X (QR)
Q3645 DTA143EUA
R3646 1k
R3645 100k
D3644 DAN217
R3643 27
R3647 27
R3641 10k
Q3644 2SC4081 (QR)
Q3642 2SC4081 (QR)
R3642 1k
R3644 100k
DTC124EUA
Q3636
Q3635 DTA124EUA
HPAC
D3636 MA111
VD+5
VH+
R3631 33k
R3632 33k
D3635 DAN202K
D3631 MTZJ5.1A
Q3631 2SC4081 (QR)
R3633 10k
R3634 4.7k
D3634 1SS133
Q3639 DTA124EUA
Q3632 UMB1N
Q3632 UMB1N
D3637 MA111
Q3633 RN1901
Q3633 RN1901
C3631 2.2/100
R3635 3.3k
R9631 0
D3632 1SS133
D3633 1SS133
Q3637 2SC4081 (QR)
Q3638 2SC4081 (QR)
C3632 470/6.3
R3638 10k
C3633 10/50
R3639 27k
Q3640 DTC124EUA
PROTECT
R9006 0
R9005 0
①
④
⑦

NOTES

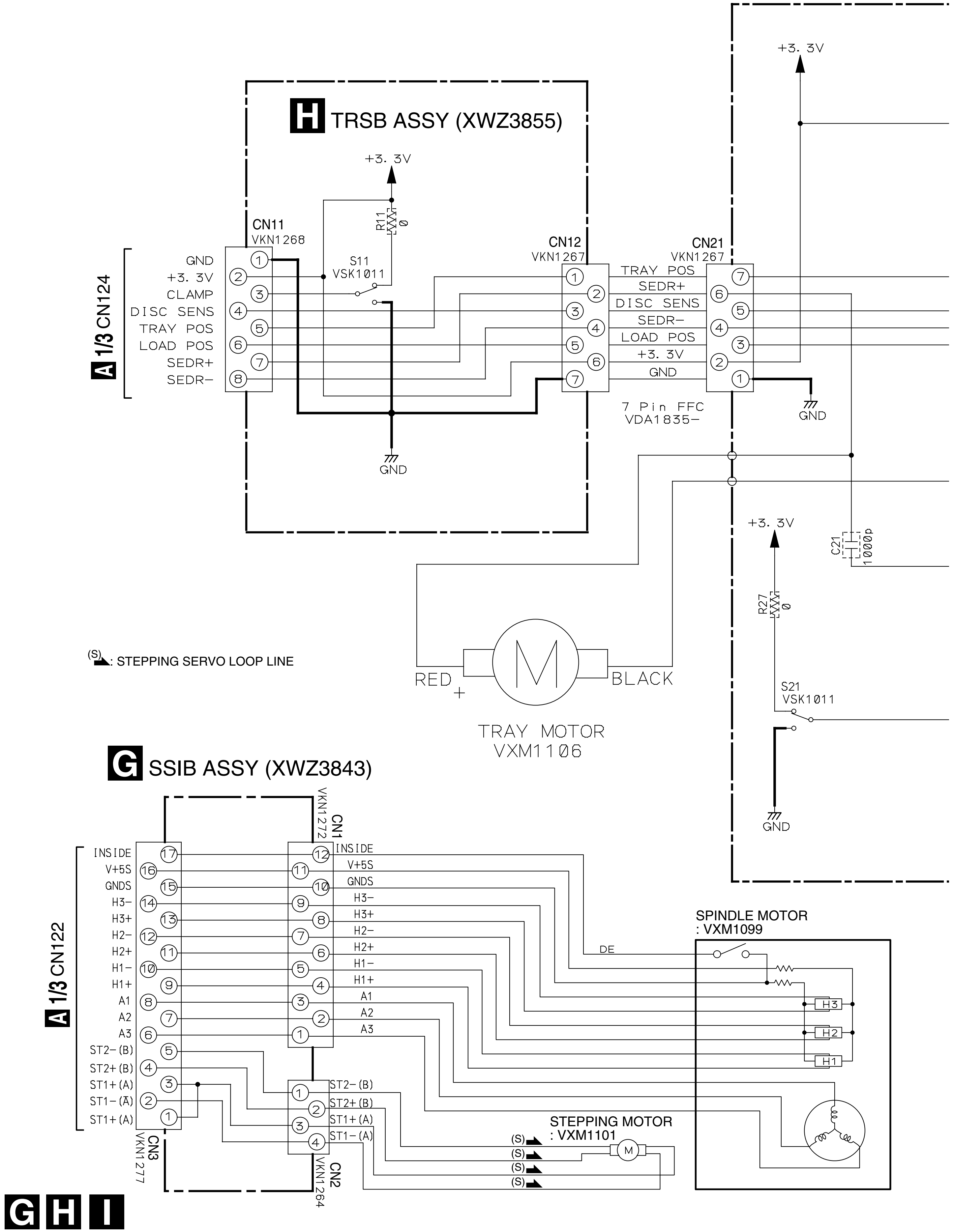
ALL CAPACITORS ARE IN µF
UNLESS OTHERWISE SPECIFIED

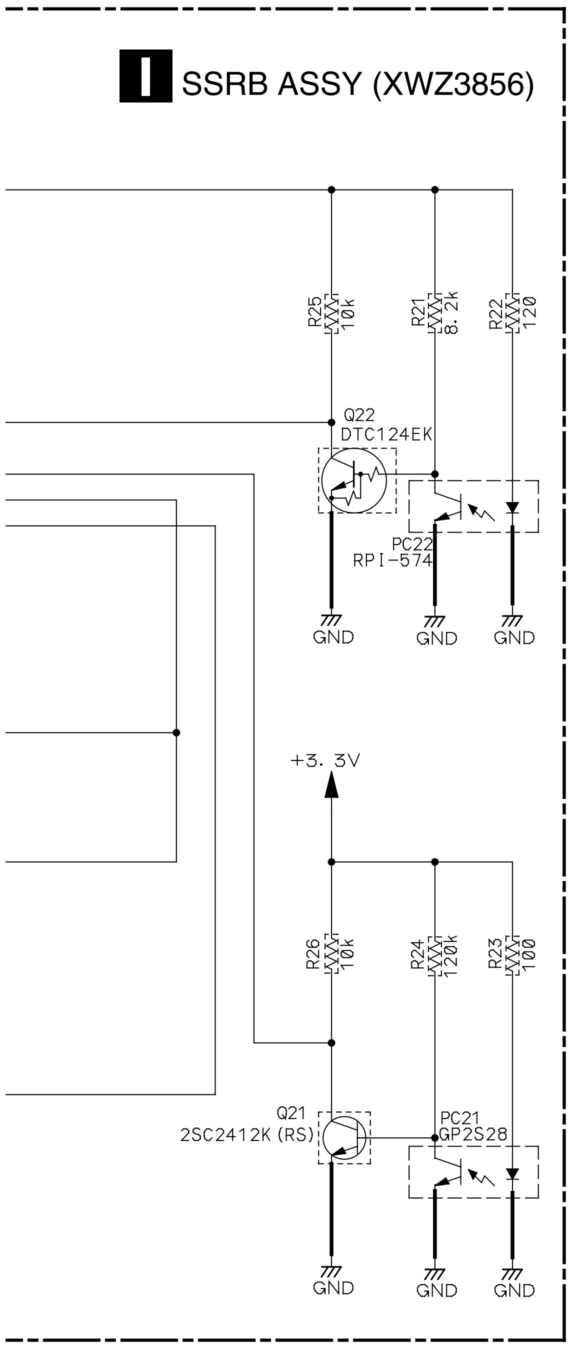
┤├ (dashed)	CH : CCSRCH (OTHER : CKSRYB)
┤├ M	CQMA
┤├ (electrolytic)	CEAT

ALL RESISTORS ARE IN Ω

╱╲╱	RS1/16S∗∗∗J
╱╲╱ (1/10W)	RS1/10S∗∗∗J
-∿-	RD1/4PU∗∗∗J
-∿- (1W)	RS1LMF∗∗∗J
-∿- PMF (1/2W)	RD1/2PMF∗∗∗J
-∿- FU (1/4W)	RF1/4PS∗∗∗J
-∿- 1%	RF1/16S∗∗∗∗F

3.13 TRSB, SSRB, LOMB and SSIB ASSYS


H TRSB ASSY (XWZ3855)
+3. 3V
R11 0
CN11 VKN1268
CN12 VKN1267
CN21 VKN1267
S11 VSK1011
A 1/3 CN124
GND
+3. 3V
CLAMP
DISC SENS
TRAY POS
LOAD POS
SEDR+
SEDR−
TRAY POS
SEDR+
DISC SENS
SEDR−
LOAD POS
+3. 3V
GND
7 Pin FFC VDA1835−
GND
C21 1000p
R27 0
S21 VSK1011
(S): STEPPING SERVO LOOP LINE
RED +
BLACK
TRAY MOTOR VXM1106
G SSIB ASSY (XWZ3843)
CN1 VKN1272
CN3 VKN1277
CN2 VKN1264
A 1/3 CN122
INSIDE
V+5S
GNDS
H3−
H3+
H2−
H2+
H1−
H1+
A1
A2
A3
ST2−(B)
ST2+(B)
ST1+(A)
ST1−(A)
ST1+(A)
DE
SPINDLE MOTOR : VXM1099
H3
H2
H1
STEPPING MOTOR : VXM1101
M
G H I


I
SSRB ASSY (XWZ3856)
R25 10k
R21 8.2k
R22 120
Q22 DTC124EK
PC22 RPI-574
GND
GND
GND
+3.3V
R26 10k
R24 120k
R23 100
Q21 2SC2412K(RS)
PC21 GP2S28
GND
GND
GND

NOTES

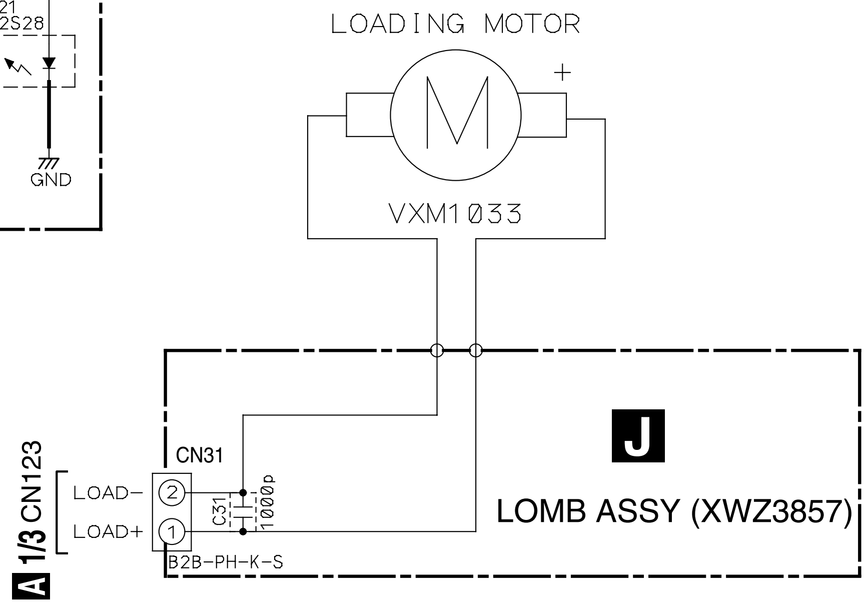
ALL RESISTORS ARE IN Ω

RS1/10S***J

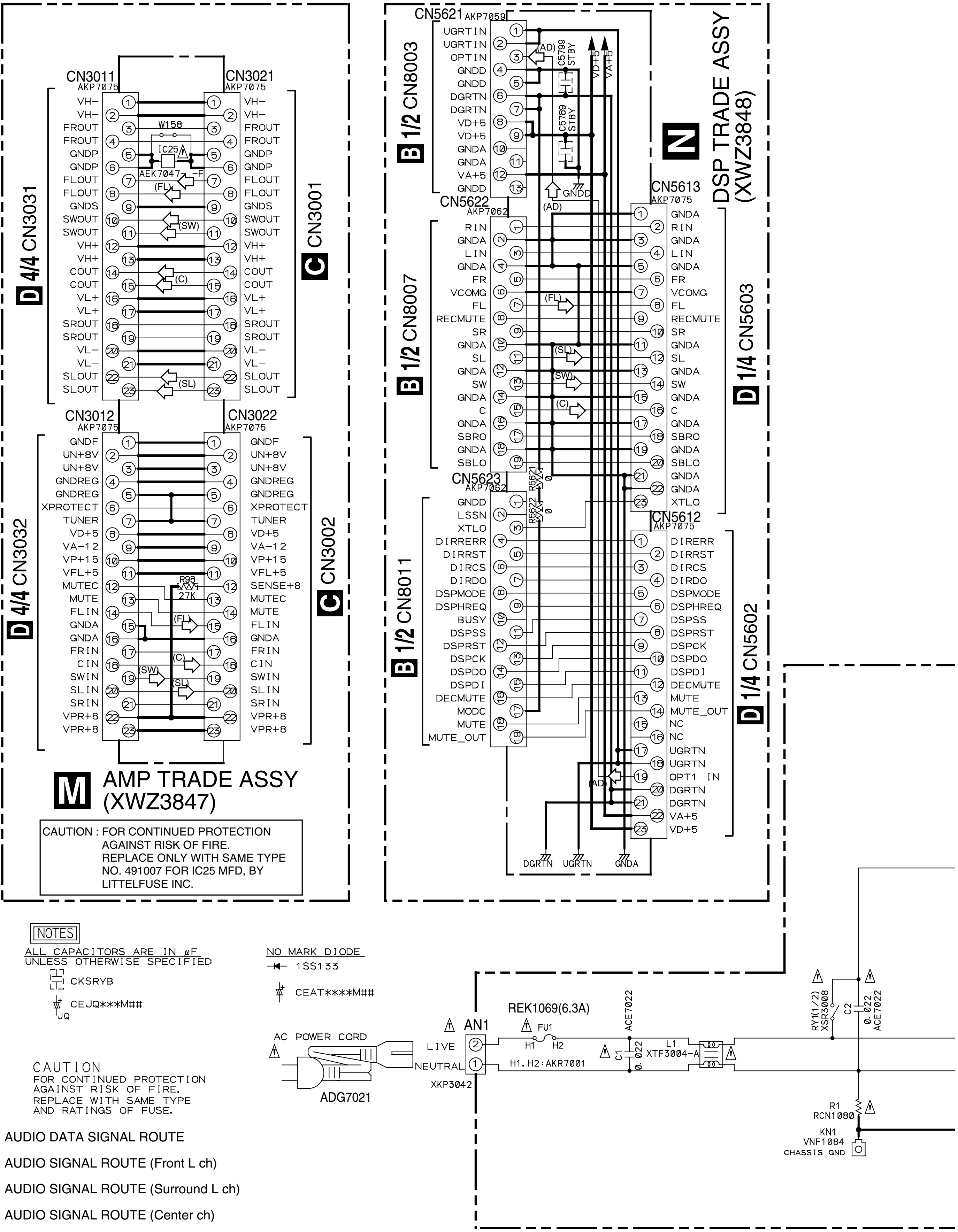
ALL CAPACITORS ARE IN µF

UNLESS OTHERWISE SPECIFIED

CKSQYB***K**


LOADING MOTOR
+
VXM1033
J
LOMB ASSY (XWZ3857)
CN31
LOAD-
LOAD+
2
1
C31 1000p
B2B-PH-K-S
A 1/3 CN123

3.14 PRIMARY, AMP TRADE, DSP TRADE and VIDEO JACK ASSYS


CN3011 AKP7075
CN3021 AKP7075
VH− VH− FROUT FROUT GNDP GNDP FLOUT FLOUT GNDS SWOUT SWOUT VH+ VH+ COUT COUT VL+ VL+ SROUT SROUT VL− VL− SLOUT SLOUT
W158
IC25
AEK7047-F
D 4/4 CN3031
C CN3001
CN3012 AKP7075
CN3022 AKP7075
GNDF UN+8V UN+8V GNDREG GNDREG XPROTECT TUNER VD+5 VA−12 VP+15 VFL+5 MUTEC MUTE FLIN GNDA GNDA FRIN CIN SWIN SLIN SRIN VPR+8 VPR+8
GNDF UN+8V UN+8V GNDREG GNDREG XPROTECT TUNER VD+5 VA−12 VP+15 VFL+5 SENSE+8 MUTEC MUTE FLIN GNDA FRIN CIN SWIN SLIN SRIN VPR+8 VPR+8
R98 27K
D 4/4 CN3032
C CN3002
M AMP TRADE ASSY (XWZ3847)
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491007 FOR IC25 MFD, BY LITTELFUSE INC.
CN5621 AKP7059
UGRTIN UGRTIN OPTIN GNDD GNDD DGRTN DGRTN VD+5 VD+5 GNDA GNDA VA+5 GNDD
C5799 STBY
C5789 STBY
VD+5
VA+5
GNDD
B 1/2 CN8003
N DSP TRADE ASSY (XWZ3848)
CN5622 AKP7062
RIN GNDA LIN GNDA FR VCOMG FL RECMUTE SR GNDA SL GNDA SW GNDA C GNDA SBRO GNDA SBLO
CN5613 AKP7075
GNDA RIN GNDA LIN GNDA FR VCOMG FL RECMUTE SR GNDA SL GNDA SW GNDA C GNDA SBRO GNDA SBLO GNDA GNDA XTLO
B 1/2 CN8007
D 1/4 CN5603
CN5623 AKP7062
R5621 0
R5622 0
GNDD LSSN XTLO DIRRERR DIRRST DIRCS DIRDO DSPMODE DSPHREQ BUSY DSPSS DSPRST DSPCK DSPDO DSPDI DECMUTE MODC MUTE MUTE_OUT
CN5612 AKP7075
DIRERR DIRRST DIRCS DIRDO DSPMODE DSPHREQ DSPSS DSPRST DSPCK DSPDO DSPDI DECMUTE MUTE MUTE_OUT NC NC UGRTN UGRTN OPT1 IN DGRTN DGRTN VA+5 VD+5
B 1/2 CN8011
D 1/4 CN5602
DGRTN UGRTN GNDA
(AD) (FL) (SW) (C) (SL)
REK1069(6.3A)
AN1
FU1
H1 H2
H1, H2:AKR7001
LIVE
NEUTRAL
XKP3042
AC POWER CORD
ADG7021
ACE7022
C1 0.022
L1 XTF3004-A
RY1(1/2) XSR3008
C2 0.022 ACE7022
R1 RCN1080
KN1 VNF1084 CHASSIS GND

NOTES

ALL CAPACITORS ARE IN μF UNLESS OTHERWISE SPECIFIED

CKSRYB

CEJQ∗∗∗M##
JQ

NO MARK DIODE

1SS133

CEAT∗∗∗∗M##

CAUTION
FOR CONTINUED PROTECTION
AGAINST RISK OF FIRE.
REPLACE WITH SAME TYPE
AND RATINGS OF FUSE.

(AD): AUDIO DATA SIGNAL ROUTE

(FL): AUDIO SIGNAL ROUTE (Front L ch)

(SL): AUDIO SIGNAL ROUTE (Surround L ch)

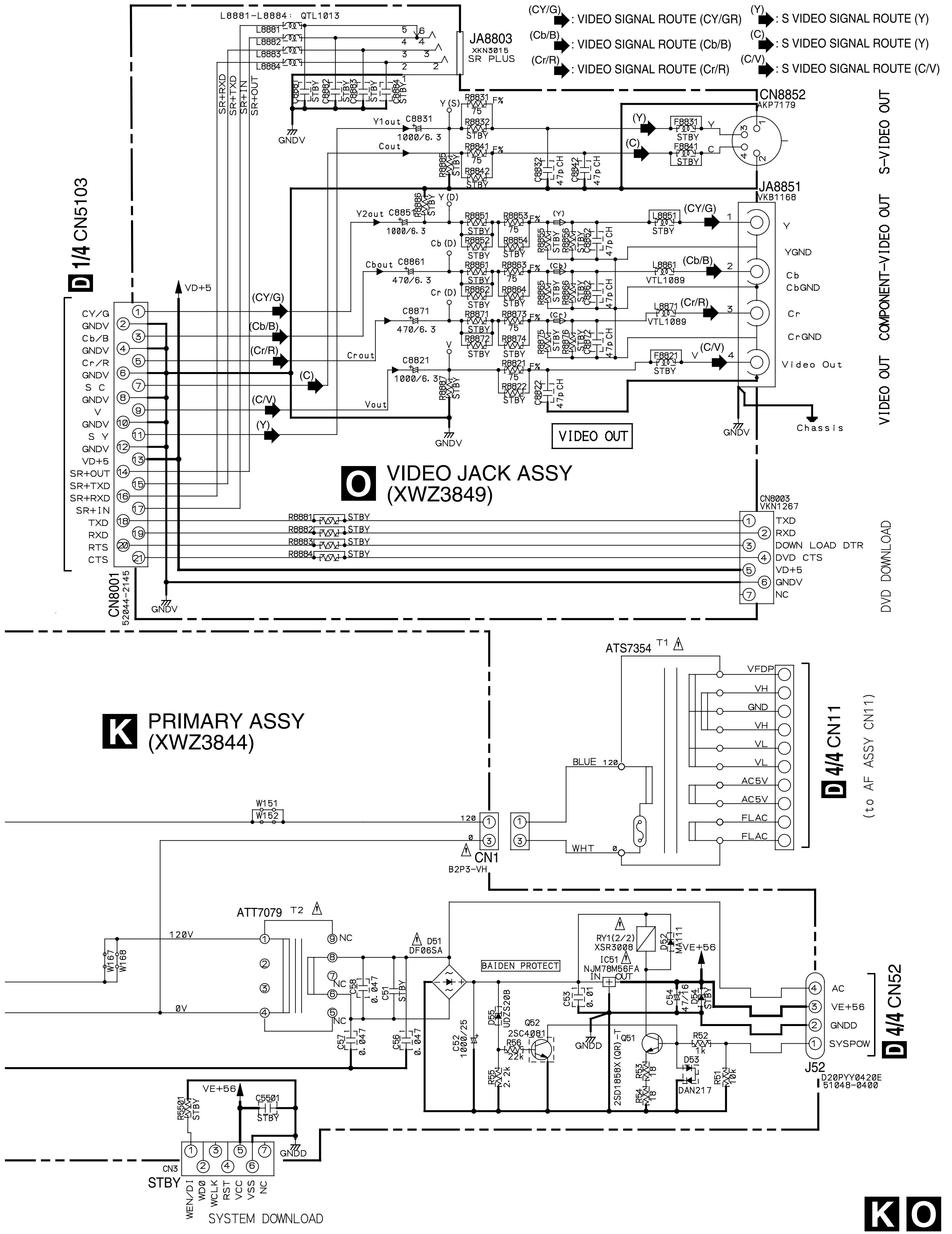
(C): AUDIO SIGNAL ROUTE (Center ch)

(SW): AUDIO SIGNAL ROUTE (Sub Woofer ch)

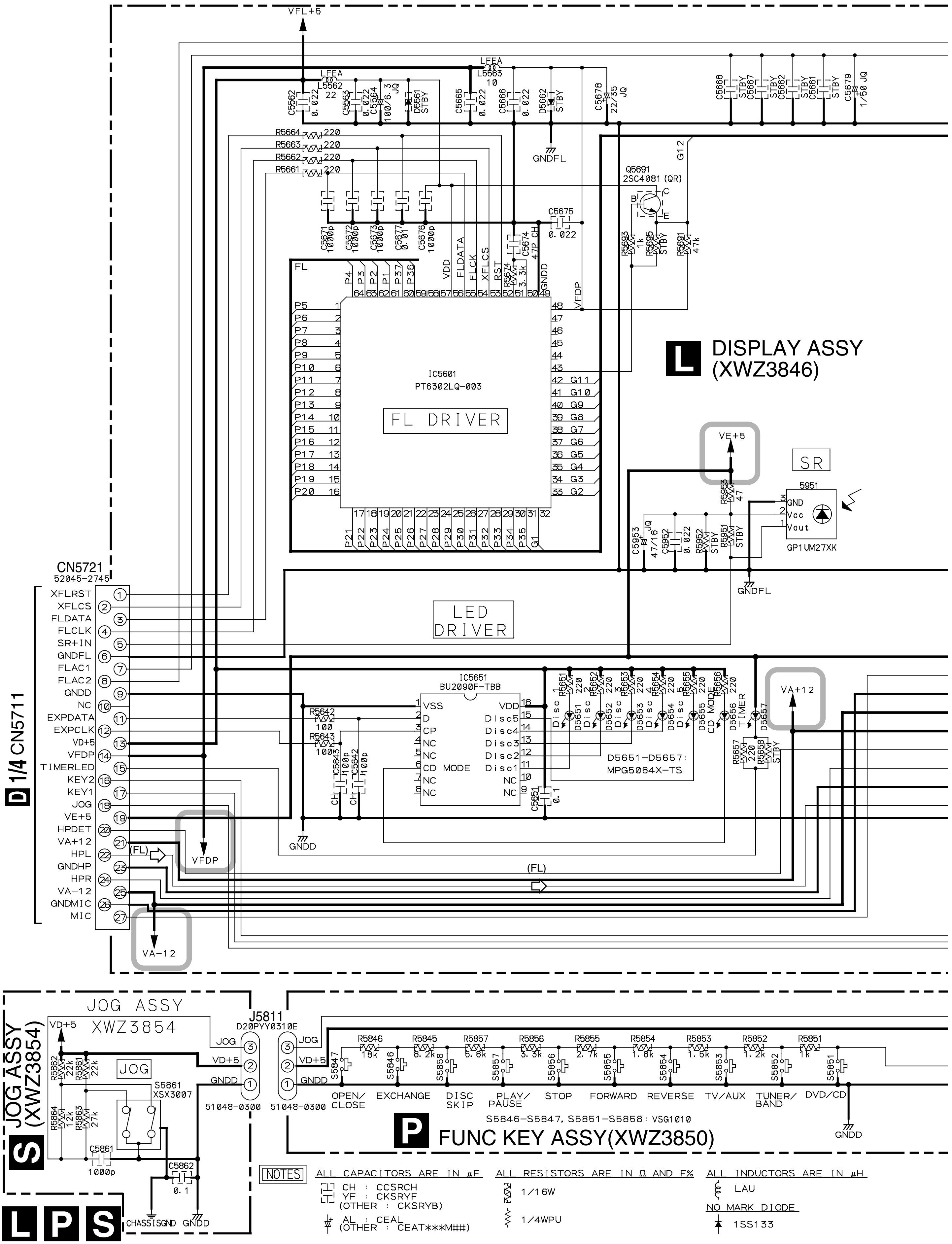
- NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE WITH SAME TYPE AND RATINGS OF FUSE.

K M N


(CY/G) : VIDEO SIGNAL ROUTE (CY/GR)
(Cb/B) : VIDEO SIGNAL ROUTE (Cb/B)
(Cr/R) : VIDEO SIGNAL ROUTE (Cr/R)
(Y) : S VIDEO SIGNAL ROUTE (Y)
(C) : S VIDEO SIGNAL ROUTE (Y)
(C/V) : S VIDEO SIGNAL ROUTE (C/V)
L8881-L8884: QTL1013
L8881
L8882
L8883
L8884
JA8803
XKN3015
SR PLUS
C8881 STBY
C8882 STBY
C8883 STBY
C8884 STBY
GNDV
SR+RXD
SR+TXD
SR+IN
SR+OUT
D 1/4 CN5103
VD+5
CY/G
GNDV
Cb/B
GNDV
Cr/R
GNDV
S C
GNDV
V
GNDV
S Y
GNDV
VD+5
SR+OUT
SR+TXD
SR+RXD
SR+IN
TXD
RXD
RTS
CTS
CN8001
52044-2145
GNDV
Y(S)
R8831 75 F%
R8832 STBY
Y1out
C8831 1000/6.3
Cout
R8841 75 F%
R8842 STBY
R8885 STBY
C8832 47p CH
C8842 47p CH
CN8852
AKP7179
F8831 STBY
F8841 STBY
S-VIDEO OUT
JA8851
VKB1168
Y(D)
R8886 STBY
Y2out
C8851 1000/6.3
R8851 STBY
R8852 STBY
R8853 75 F%
R8854 STBY
R8855 STBY
R8856 STBY
C8852 STBY
47p CH
L8851 STBY
Y
YGND
Cb(D)
Cbout
C8861 470/6.3
R8861 STBY
R8862 STBY
R8863 75 F%
R8864 STBY
R8865 STBY
R8866 STBY
C8862 STBY
L8861 VTL1089
Cb
CbGND
Cr(D)
C8871 470/6.3
R8871 STBY
R8872 STBY
R8873 75 F%
R8874 STBY
R8875 STBY
R8876 STBY
C8872 STBY
L8871 VTL1089
Cr
CrGND
COMPONENT-VIDEO OUT
Crout
V
C8821 1000/6.3
R8821 75 F%
R8822 STBY
R8887 STBY
C8822 47p CH
F8821 STBY
Video Out
VIDEO OUT
Vout
GNDV
Chassis
O VIDEO JACK ASSY (XWZ3849)
CN8003
VKN1267
R8881 STBY
R8882 STBY
R8883 STBY
R8884 STBY
TXD
RXD
DOWN LOAD DTR
DVD CTS
VD+5
GNDV
NC
DVD DOWNLOAD
K PRIMARY ASSY (XWZ3844)
ATS7354 T1
VFDP
VH
GND
VH
VL
VL
AC5V
AC5V
FLAC
FLAC
D 4/4 CN11
(to AF ASSY CN11)
BLUE 120
WHT 0
W151
W152
120
0
CN1
B2P3-VH
ATT7079 T2
120V
0V
W167
W168
NC
NC
NC
C58 0.047
C51 STBY
C57 0.047
C56 0.047
D51
DF06SA
BAIDEN PROTECT
C52 1000/25
D55 UDZS20B
Q52
2SC4081
R56 22k
R55 2.2k
RY1(2/2)
XSR3008
D52 MA111
IC51
NJM78M56FA
IN OUT
C53 0.01
GNDD
VE+56
C54 47/16
D54 STBY
Q51
2SD1858X(QR)-T
R53 18
R54 18
R52 1k
D53
DAN217
R51 10k
AC
VE+56
GNDD
SYSPOW
J52
D20PYY0420E
51048-0400
D 4/4 CN52
VE+56
R5501 STBY
C5501 STBY
GNDD
CN3
STBY
WEN/DI
WD0
WCLK
RST
VCC
VSS
NC
SYSTEM DOWNLOAD
K O

3.15 DIPLAY, FUNC KEY, DISC KEY, HP MIC and JOG ASSYS


VFL+5
LFEA L5562 22
LFEA L5563 10
C5562 0.022
C5563 0.022
C5564 100/6.3 JQ
D5561 STBY
C5665 0.022
C5666 0.022
D5562 STBY
C5678 22/35 JQ
GNDFL
C5668 STBY
C5667 STBY
C5662 STBY
C5661 STBY
C5679 1/50 JQ
G12
R5664 220
R5663 220
R5662 220
R5661 220
Q5691 2SC4081 (QR)
B C E
C5675 0.022
C5671 1000p
C5672 1000p
C5673 1000p
C5677 0.01
C5676 1000p
C5674 47P CH
R5674 3.3k
R5693 1k
R5695 STBY
R5691 47k
FL
VDD FLDATA FLCK XFLCS RST GNDD VFDP
P4 P3 P2 P1 P37 P36
P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15 P16 P17 P18 P19 P20
P21 P22 P23 P24 P25 P26 P27 P28 P29 P30 P31 P32 P33 P34 P35 G1
G11 G10 G9 G8 G7 G6 G5 G4 G3 G2
IC5601
PT6302LQ-003
FL DRIVER
L
DISPLAY ASSY
(XWZ3846)
VE+5
SR
5951
GND Vcc Vout
GP1UM27XK
R5953 47
C5953 47/16 JQ
C5952 0.022
R5952 STBY
R5951 STBY
GNDFL
LED DRIVER
CN5721
52045-2745
XFLRST XFLCS FLDATA FLCLK SR+IN GNDFL FLAC1 FLAC2 GNDD NC EXPDATA EXPCLK VD+5 VFDP TIMERLED KEY2 KEY1 JOG VE+5 HPDET VA+12 HPL GNDHP HPR VA-12 GNDMIC MIC
D 1/4 CN5711
IC5651
BU2090F-TBB
VSS D CP NC NC CD MODE NC NC
VDD Disc5 Disc4 Disc3 Disc2 Disc1 NC NC
R5642 100
R5643 100
C5643 100p
C5642 100p
C5651 0.1
R5651 220 R5652 220 R5653 220 R5654 220 R5655 220 R5656 220
D5651 Disc 1
D5652 Disc 2
D5653 Disc 3
D5654 Disc 4
D5655 Disc 5
D5656 CD MODE
D5657 TIMER
R5657 220
R5658 STBY
D5651–D5657: MPG5064X-TS
VA+12
VFDP
(FL)
GNDD
VA-12
JOG ASSY
XWZ3854
S
JOG ASSY (XWZ3854)
VD+5
R5862 22k
R5861 22k
R5864 12k
R5863 27k
JOG
S5861 XSX3007
C5861 1000p
C5862 0.1
CHASSISGND GNDD
J5811
D20PYY0310E
JOG VD+5 GNDD
51048-0300
R5846 18k
R5845 8.2k
R5857 5.6k
R5856 3.3k
R5855 2.7k
R5854 1.8k
R5853 1.5k
R5852 1.2k
R5851 1k
S5847 S5846 S5858 S5857 S5856 S5855 S5854 S5853 S5852 S5851
OPEN/CLOSE
EXCHANGE
DISC SKIP
PLAY/PAUSE
STOP
FORWARD
REVERSE
TV/AUX
TUNER/BAND
DVD/CD
S5846–S5847, S5851–S5858: VSG1010
GNDD
P
FUNC KEY ASSY(XWZ3850)
L P S

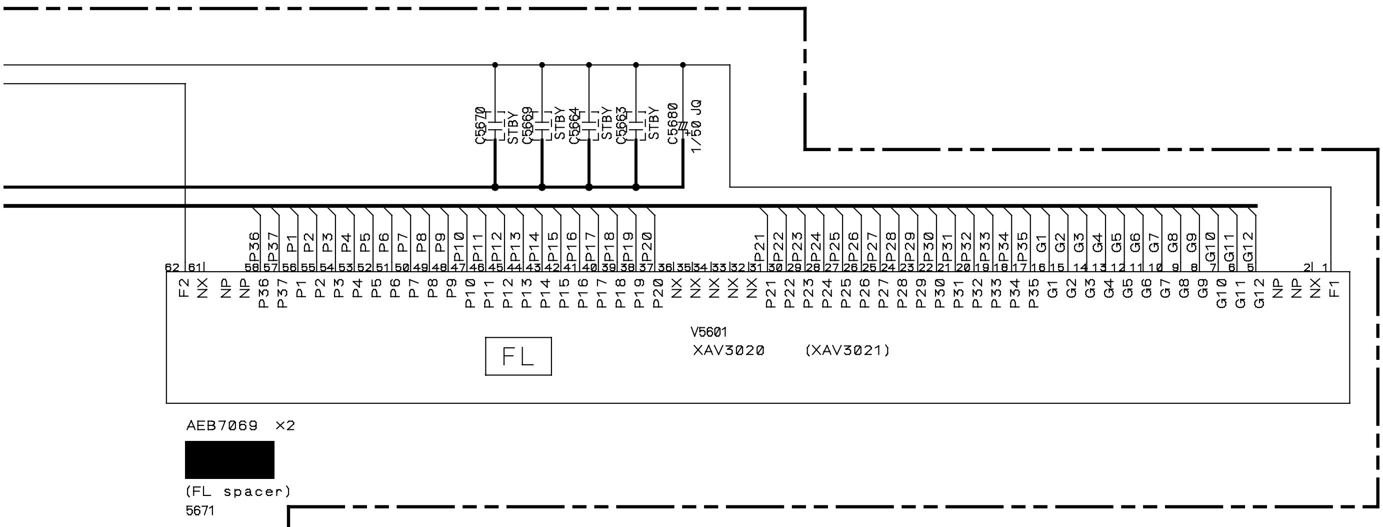
NOTES

ALL CAPACITORS ARE IN µF
CH : CCSRCH
YF : CKSRYF
(OTHER : CKSRYB)
AL : CEAL
(OTHER : CEAT✱✱✱M##)

ALL RESISTORS ARE IN Ω AND F%
1/16W
1/4WPU

ALL INDUCTORS ARE IN µH
LAU

NO MARK DIODE
1SS133


C5670
STBY
C5669
STBY
C5664
STBY
C5663
STBY
C5680
1/50 JQ
V5601
XAV3020 (XAV3021)
FL
F2 NX NP NP P36 P37 P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15 P16 P17 P18 P19 P20 NX NX NX NX P21 P22 P23 P24 P25 P26 P27 P28 P29 P30 P31 P32 P33 P34 P35 G1 G2 G3 G4 G5 G6 G7 G8 G9 G10 G11 G12 NP NP NX F1
AEB7069 ×2
(FL spacer)
5671

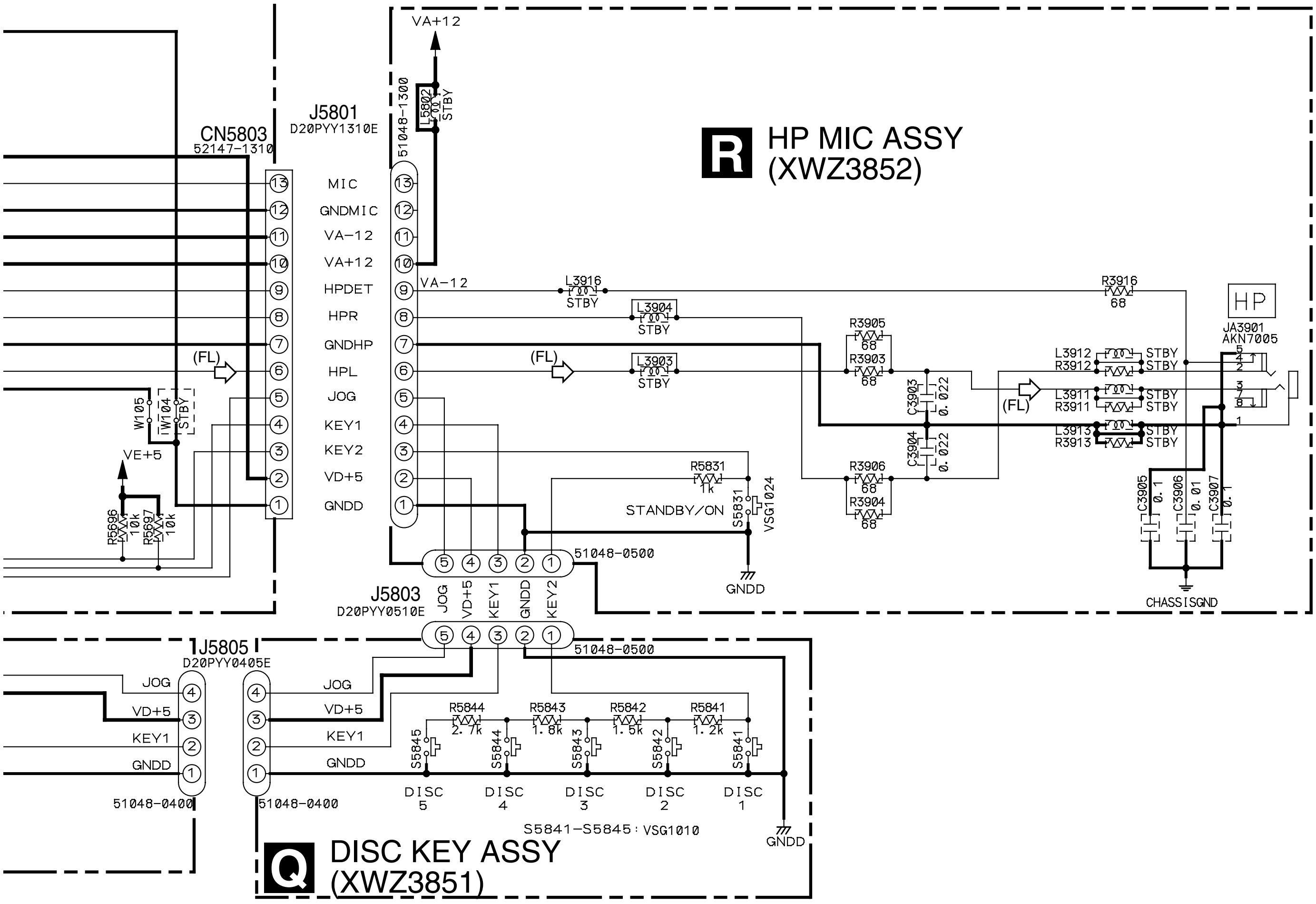
JOG ASSY
S5861 : VOLUME UP ↔ DOWN

DISC KEY ASSY
S5841 : DISC 1
S5842 : DISC 2
S5843 : DISC 3
S5844 : DISC 4
S5845 : DISC 5

FUNCTION KEY ASSY
S5851 : DVD/CD
S5852 : TUNER (FM/AM/ST.)
S5853 : TV/L1/L2
S5854 : ⏮ ◀◀ (REVERSE)
S5855 : ▶▶ ⏭ (FORWARD)
S5856 : ■ (STOP)
S5857 : ▶/⏸ (PLAY/PAUSE)
S5858 : DISC SKIP
S5846 : EXCHANGE
S5847 : OPEN/CLOSE (⏏)

HP MIC ASSY
S5831 : ⏻ STAND BY/ON

(FL) ⇨ : AUDIO SIGNAL ROUTE (Front L ch)


VA+12
L5802
STBY
51048-1300
J5801
D20PYY1310E
CN5803
52147-1310
MIC
GNDMIC
VA-12
VA+12
HPDET
HPR
GNDHP
HPL
JOG
KEY1
KEY2
VD+5
GNDD
R HP MIC ASSY (XWZ3852)
VA-12
L3916 STBY
R3916 68
HP
L3904 STBY
L3903 STBY
(FL)
R3905 68
R3903 68
C3903 0.022
C3904 0.022
R3906 68
R3904 68
JA3901
AKN7005
L3912 STBY
R3912 STBY
L3911 STBY
R3911 STBY
L3913 STBY
R3913 STBY
C3905 0.1
C3906 0.01
C3907 0.1
CHASSISGND
R5831 1k
STANDBY/ON
S5831 VSG1024
GNDD
51048-0500
W105
W104
STBY
VE+5
R5696 10k
R5697 10k
J5803
D20PYY0510E
JOG VD+5 KEY1 GNDD KEY2
51048-0500
J5805
D20PYY0405E
JOG
VD+5
KEY1
GNDD
51048-0400
51048-0400
R5844 2.7k
R5843 1.8k
R5842 1.5k
R5841 1.2k
S5845 S5844 S5843 S5842 S5841
DISC 5 DISC 4 DISC 3 DISC 2 DISC 1
S5841-S5845 : VSG1010
GNDD
Q DISC KEY ASSY (XWZ3851)

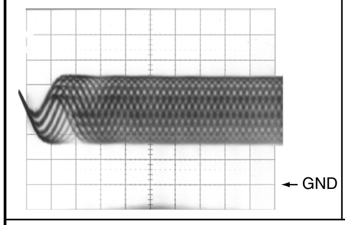
3.16 DVDM WAVEFORMS

A DVDM ASSY

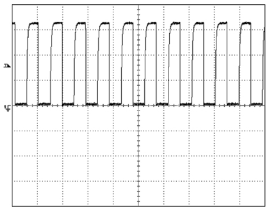
Note : The encircled numbers denote measuring point in the schematic diagram.

Measurement condition : No. 1 to 2 and 8 to 13 : reference A1 (DVD), T2-chp 19, Color -bar

① **IC301-pin 4 (RFOUT)**
V: 200mV/div. H: 0.1µsec/div.

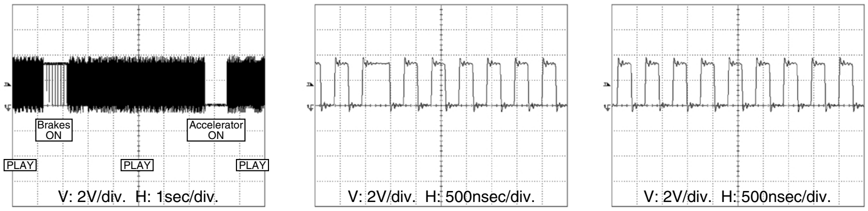


② **IC301-pin 36 (FG)**
V: 1V/div. H: 5msec/div.



③ **IC301-pin 44 (SPDL_PDM)**

[PLAY → STOP → PLAY] **[PLAY]** **[STOP]**

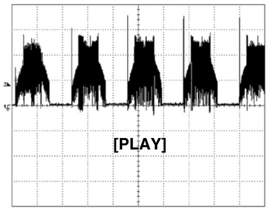


V: 2V/div. H: 1sec/div.

V: 2V/div. H: 500nsec/div.

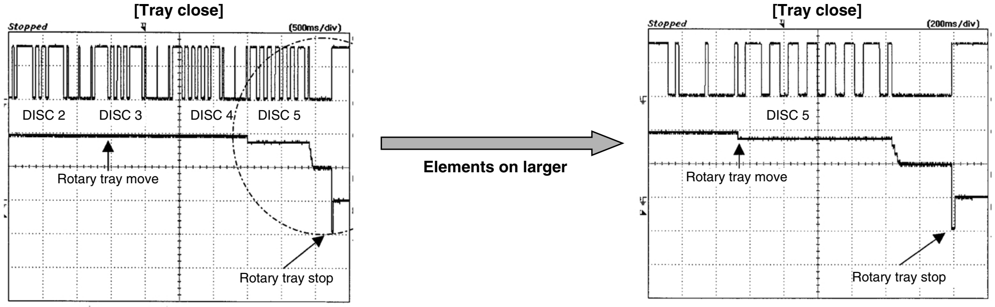
V: 2V/div. H: 500nsec/div.

④ **CN122-pin 8, 7, 6 (FTS Driver -A1, A2, A3)**
V: 2V/div. H: 2msec/div.



⑥ **CN124-pin 5 (TRAY POS)**
CN124-pin 7, 8
(Rotating Tray Motor drive voltage)

[Tray close] **[Tray close]**



V: 2V/div. H: 500msec/div.

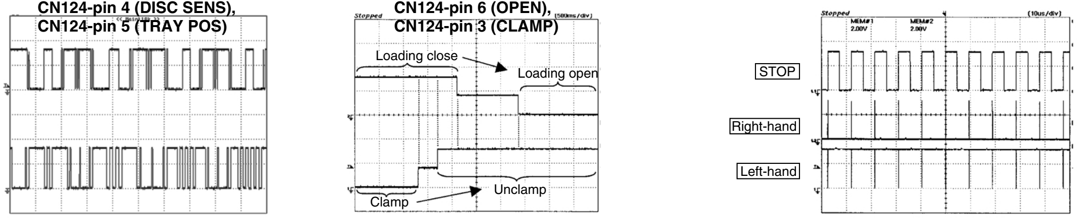
V: 2V/div. H: 200msec/div.

⑦ **CN124-pin 4, 5, 6, 3**
IC601-pin 114

[Tray move]
CN124-pin 4 (DISC SENS),
CN124-pin 5 (TRAY POS)

[Tray open]
CN124-pin 6 (OPEN),
CN124-pin 3 (CLAMP)

IC601-pin 114 (ROT_DRV)

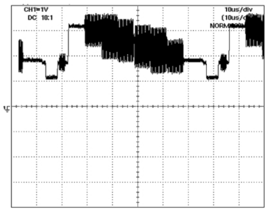


V: 2V/div. H: 1sec/div.

V: 2V/div. H: 500msec/div.

V: 2V/div. H: 10µsec/div.

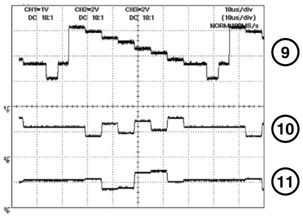
⑧ **CN923-pin 16 (Composite Video out)**
V: 1V/div. H: 10µsec/div.



⑨ **CN923-pin 8 (Component Video out-Y)**
V: 1V/div. H: 10µsec/div.

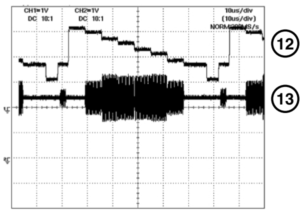
⑩ **CN923-pin 10 (Component Video out-Pb)**
V: 2V/div. H: 10µsec/div.

⑪ **CN923-pin 12 (Component Video out-Pr)**
V: 2V/div. H: 10µsec/div.



⑫ **CN923-pin 18 (S Video out-Y)**
V: 1V/div. H: 10µsec/div.

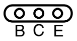
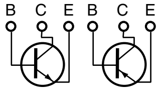
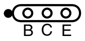
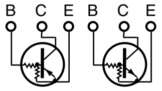
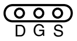
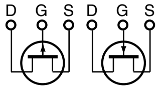
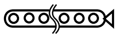
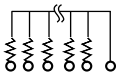
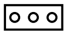
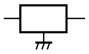
⑬ **CN923-pin 14 (S Video out-C)**
V: 1V/div. H: 10µsec/div.



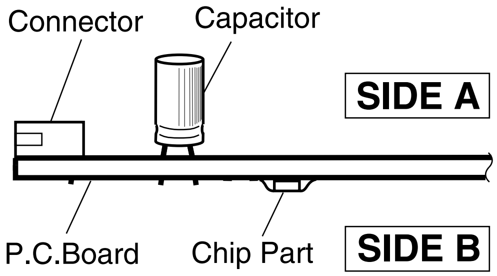
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.


Connector
Capacitor
SIDE A
P.C.Board
Chip Part
SIDE B

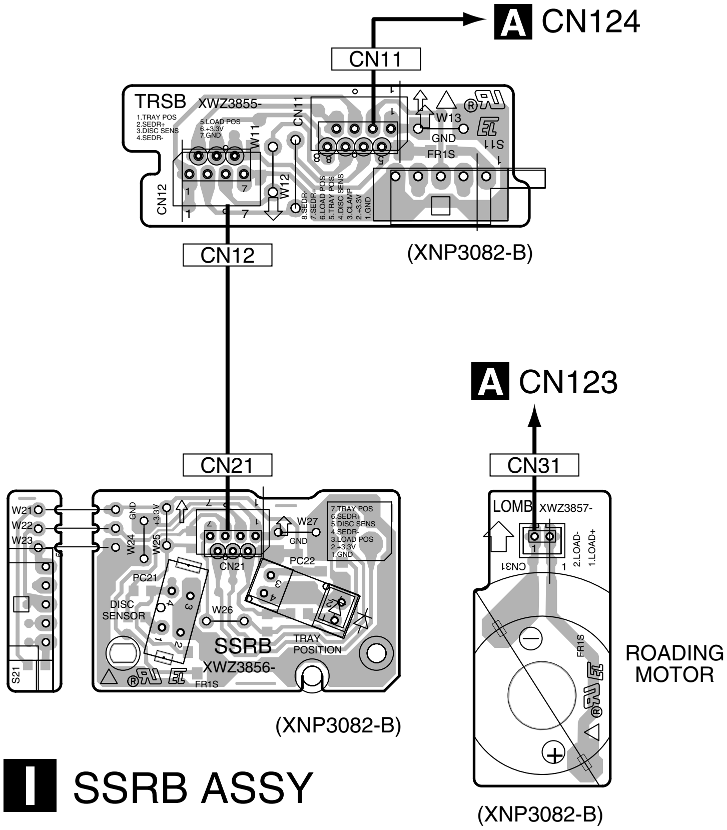
4.1 TRSB, SSRB, LOMB and SSIB ASSYS

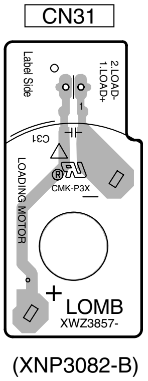
SIDE A

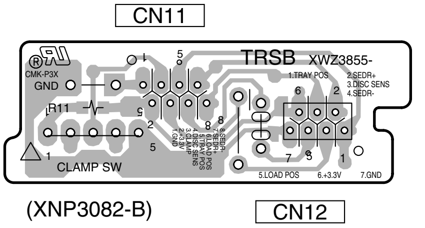
SIDE B

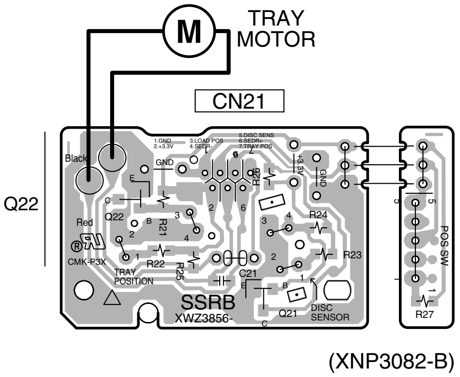
H TRSB ASSY

H TRSB ASSY


A CN124
CN11
TRSB XWZ3855-
1.TRAY POS
2.SEDR+
3.DISC SENS
4.SEDR-
5.LOAD POS
6.+3.3V
7.GND
W11
W12
W13
GND
FR1S
S11
CN12
(XNP3082-B)
CN12
A CN123
CN21
CN31
W21
W22
W23
W24
W25
W26
W27
GND
+3.3V
7.TRAY POS
6.SEDR+
5.DISC SENS
4.SEDR-
3.LOAD POS
2.+3.3V
1.GND
PC21
PC22
DISC SENSOR
TRAY POSITION
SSRB
XWZ3856-
FR1S
S21
(XNP3082-B)
LOMB XWZ3857-
2.LOAD-
1.LOAD+
ROADING MOTOR
(XNP3082-B)


CN31
Label Side
2.LOAD-
1.LOAD+
C31
CMK-P3X
LOADING MOTOR
LOMB
XWZ3857-
(XNP3082-B)


CN11
TRSB XWZ3855-
CMK-P3X
GND
R11
CLAMP SW
1.TRAY POS
2.SEDR+
3.DISC SENS
4.SEDR-
5.LOAD POS
6.+3.3V
7.GND
(XNP3082-B)
CN12


M
TRAY MOTOR
CN21
Black
Red
GND
Q22
R21
R22
R23
R24
R25
C21
Q21
CMK-P3X
TRAY POSITION
SSRB
XWZ3856-
DISC SENSOR
POS SW
R27
(XNP3082-B)

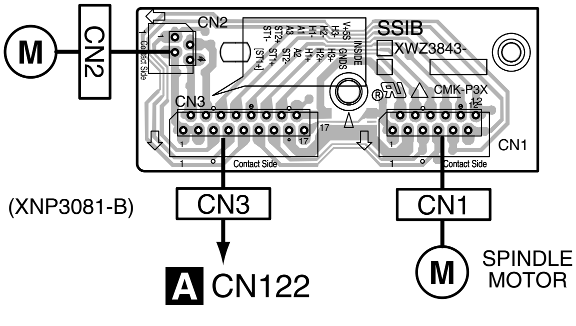
I SSRB ASSY

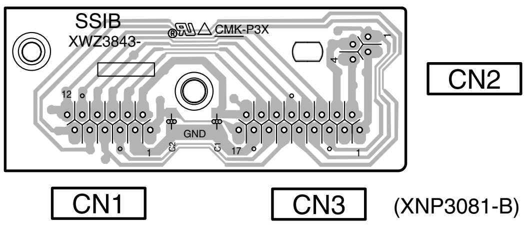
I SSRB ASSY

J LOMB ASSY

G SSIB ASSY

G SSIB ASSY


M
CN2
CN2
SSIB
XWZ3843-
CMK-P3X
CN3
CN1
Contact Side
Contact Side
(XNP3081-B)
CN3
CN1
A CN122
M
SPINDLE MOTOR


SSIB
XWZ3843-
CMK-P3X
CN2
GND
CN1
CN3
(XNP3081-B)

G H I J

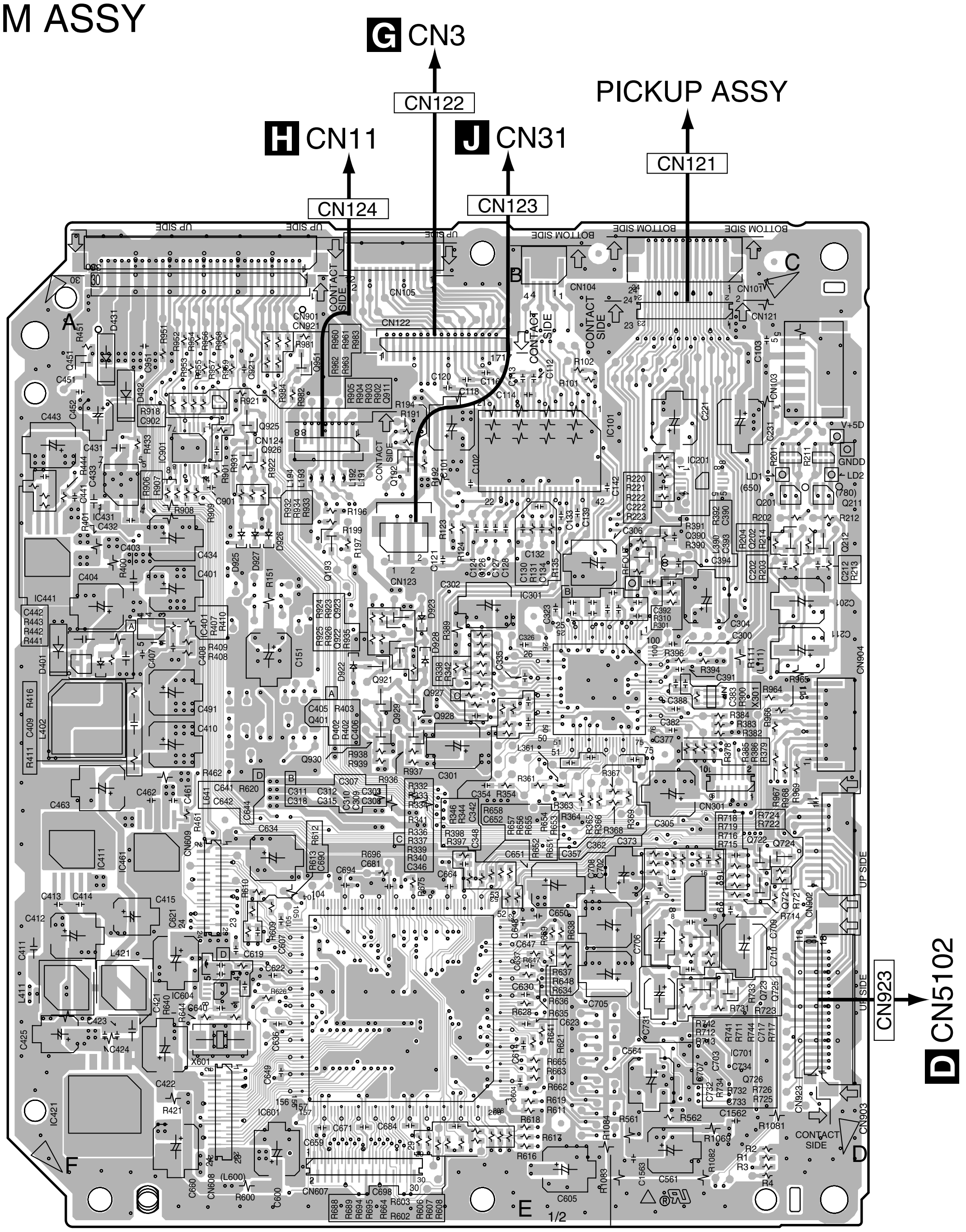
G H I J

4.2 DVDM ASSY

SIDE A **SIDE A**

IC421
IC601
Q726
IC701
Q451 Q951
IC604
Q725 Q723
Q911
Q925
IC101
Q926 IC901 IC201
Q721
Q192
Q201 Q211 IC461
IC431 IC411
Q390 Q724 Q722
Q202 Q212
Q193
IC441 IC301
Q923 Q930
IC401
Q922
Q928 Q929 Q401
Q921
Q927 Q927
Q921
Q401 Q929 Q928
Q922
IC401
Q930 Q923
IC301 IC441
Q193
Q212 Q202
Q722 Q724 Q390
IC411 IC431
IC461
Q211 Q201
Q192
Q721 IC201 IC901
Q926
IC101
Q925
Q911
Q723 Q725 IC604
Q951 Q451
IC701
Q726
IC601
IC421

A DVDM ASSY

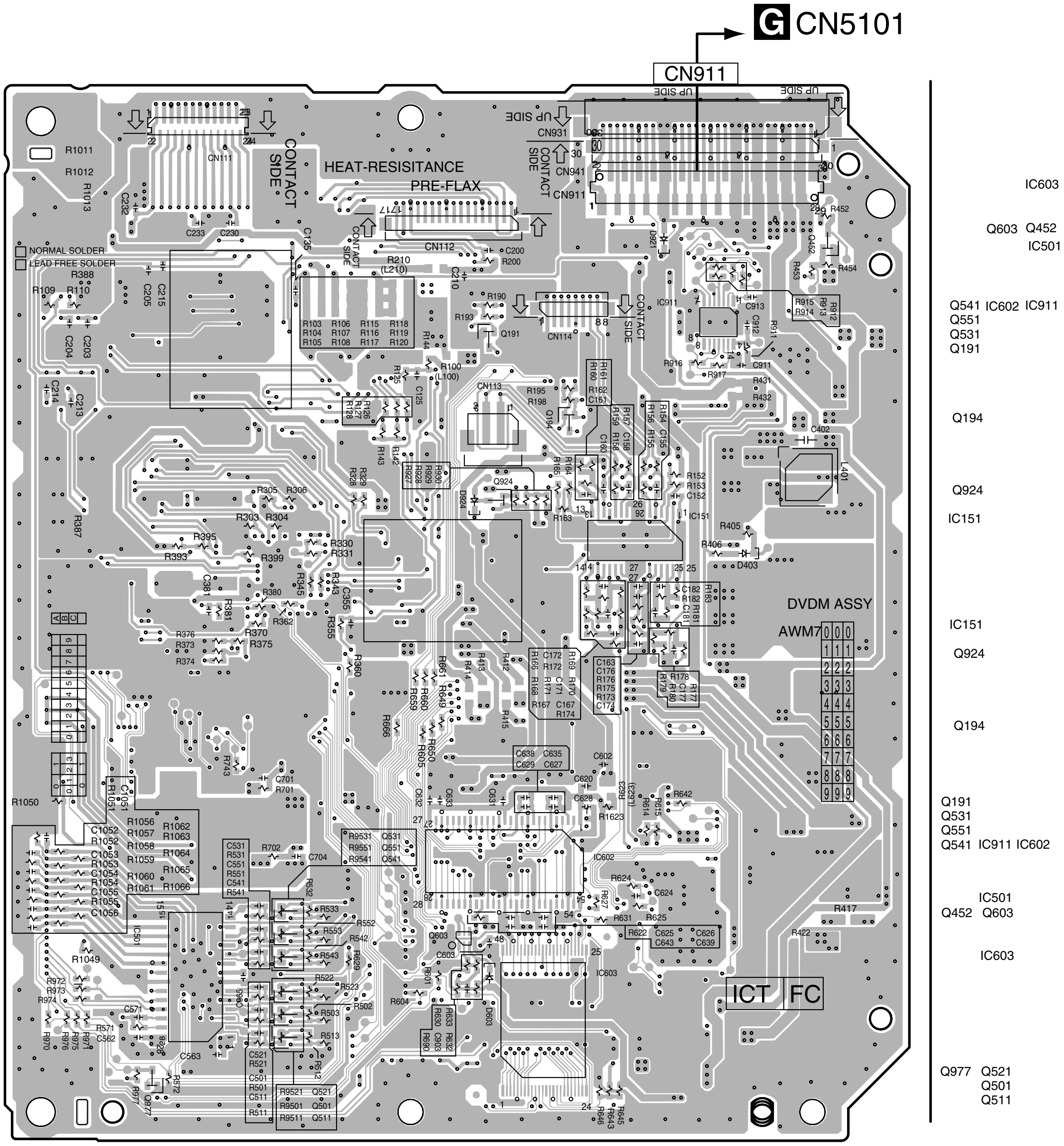

G CN3
CN122
PICKUP ASSY
H CN11
J CN31
CN121
CN124
CN123
UP SIDE
BOTTOM SIDE
CONTACT SIDE
V+5D
GNDD
LD2
LD1
CN923
D CN5102
1/2

(ANP7463-B)

A **A**

SIDE B **SIDE B**

A DVDM ASSY


G CN5101
CN911
UP SIDE
CN931
CN941
CONTACT SIDE
HEAT-RESISITANCE
PRE-FLAX
CN111
CN112
CN113
CN114
NORMAL SOLDER
LEAD FREE SOLDER
DVDM ASSY
AWM7
ICT
FC
IC151
IC501
IC602
IC603
IC911
L401
Q191
Q194
Q924
Q603
Q452
Q541
Q551
Q531
Q521
Q501
Q511
Q977
IC603
Q603 Q452
IC501
Q541 IC602 IC911
Q551
Q531
Q191
Q194
Q924
IC151
IC151
Q924
Q194
Q191
Q531
Q551
Q541 IC911 IC602
IC501
Q452 Q603
IC603
Q977 Q521
Q501
Q511

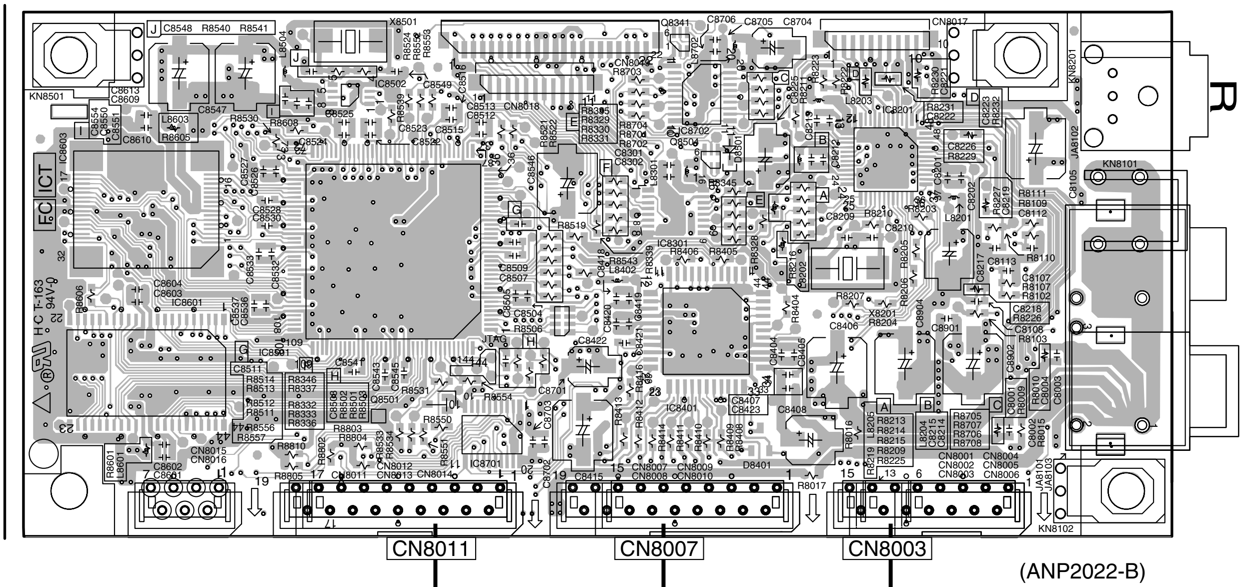
(ANP7463-B)

4.3 DSP, DSP TRADE and AMP TRADE ASSYS

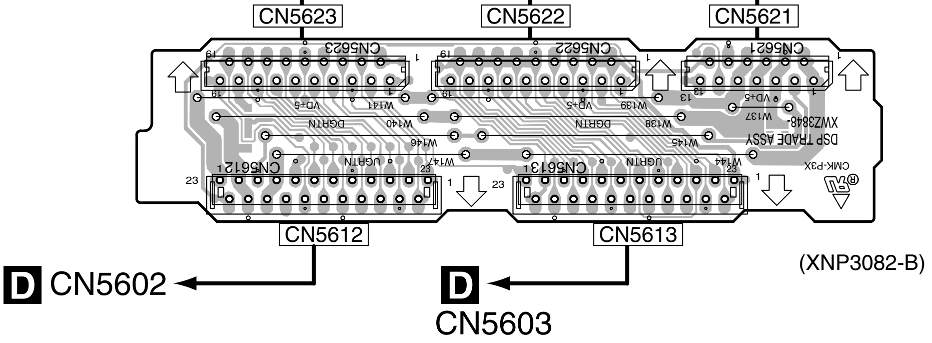
SIDE A

SIDE A

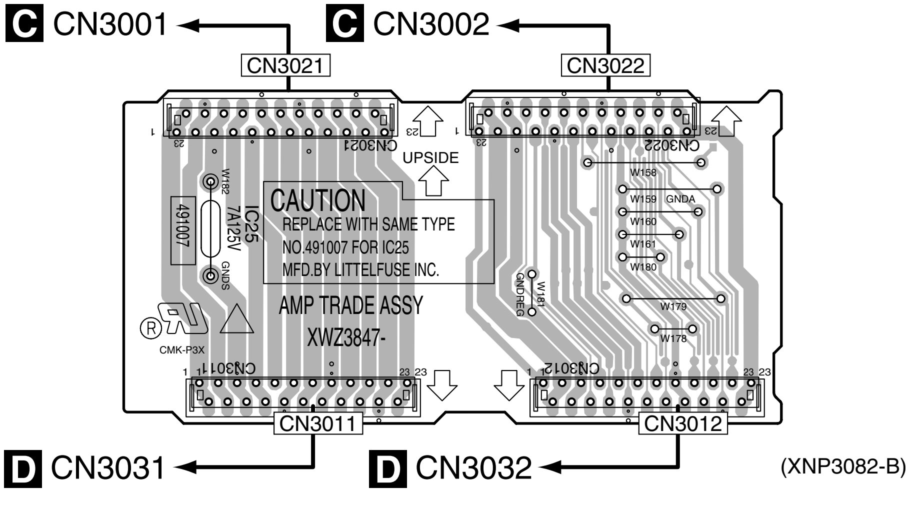
B DSP ASSY


Q8341
IC8502
IC8201
IC8702
Q8504
IC8603
IC8301
IC8601
IC8501
IC8401
Q8501
IC8701
CN8011
CN8007
CN8003
KN8102
(ANP2022-B)

N DSP TRADE ASSY


CN5623
CN5622
CN5621
DSP TRADE ASSY
XWZ3848-
CMK-P3X
CN5612
CN5613
D CN5602
D CN5603
(XNP3082-B)

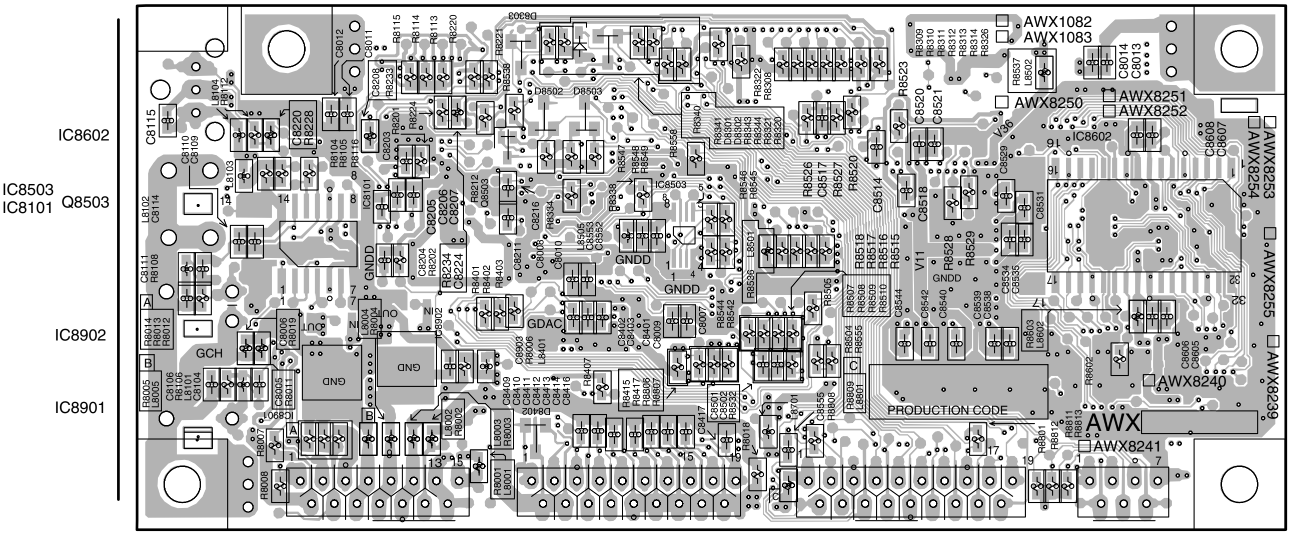
M AMP TRADE ASSY


C CN3001
C CN3002
CN3021
CN3022
UPSIDE
CAUTION
REPLACE WITH SAME TYPE
NO.491007 FOR IC25
MFD.BY LITTELFUSE INC.
IC25
7A125V
491007
AMP TRADE ASSY
XWZ3847-
CMK-P3X
W158
W159
GNDA
W160
W161
W180
W179
W178
W181
GNDREG
CN3011
CN3012
D CN3031
D CN3032
(XNP3082-B)

B M N

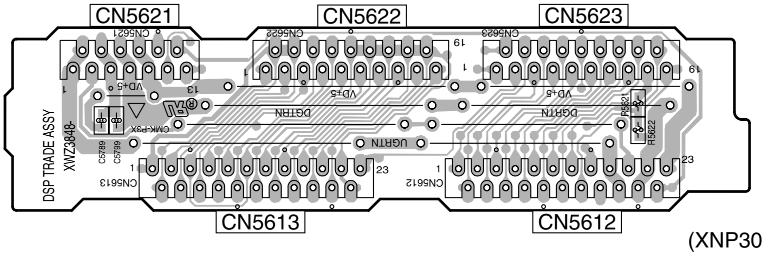
B M N

B DSP ASSY


IC8602
IC8503
IC8101
Q8503
IC8902
IC8901
AWX1082
AWX1083
AWX8250
AWX8251
AWX8252
AWX8253
AWX8254
AWX8255
AWX8239
AWX8240
AWX8241
AWX
PRODUCTION CODE
GNDD
GDAC
GCH
GND
IC8602
V36
V11
C8115
C8220
R8228
C8205
C8206
C8207
R8234
C8224
C8514
C8518
C8520
C8521
R8526
C8517
R8527
R8520
R8528
R8529
R8518
R8517
R8516
R8515
R8523
D8502
D8503
D8303

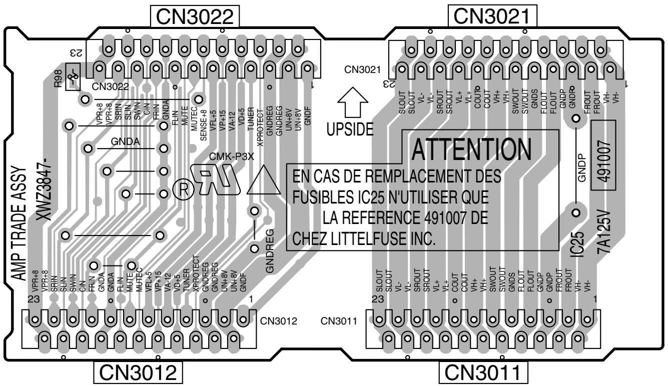
(ANP2022-B)

N DSP TRADE ASSY


CN5621
CN5622
CN5623
CN5613
CN5612
DSP TRADE ASSY
XWZ3848-
CMK-P3X
VD+5
DGTRN
UGTRN
R5621
R5622
C5789
C5799
1
13
19
23

(XNP3082-B)

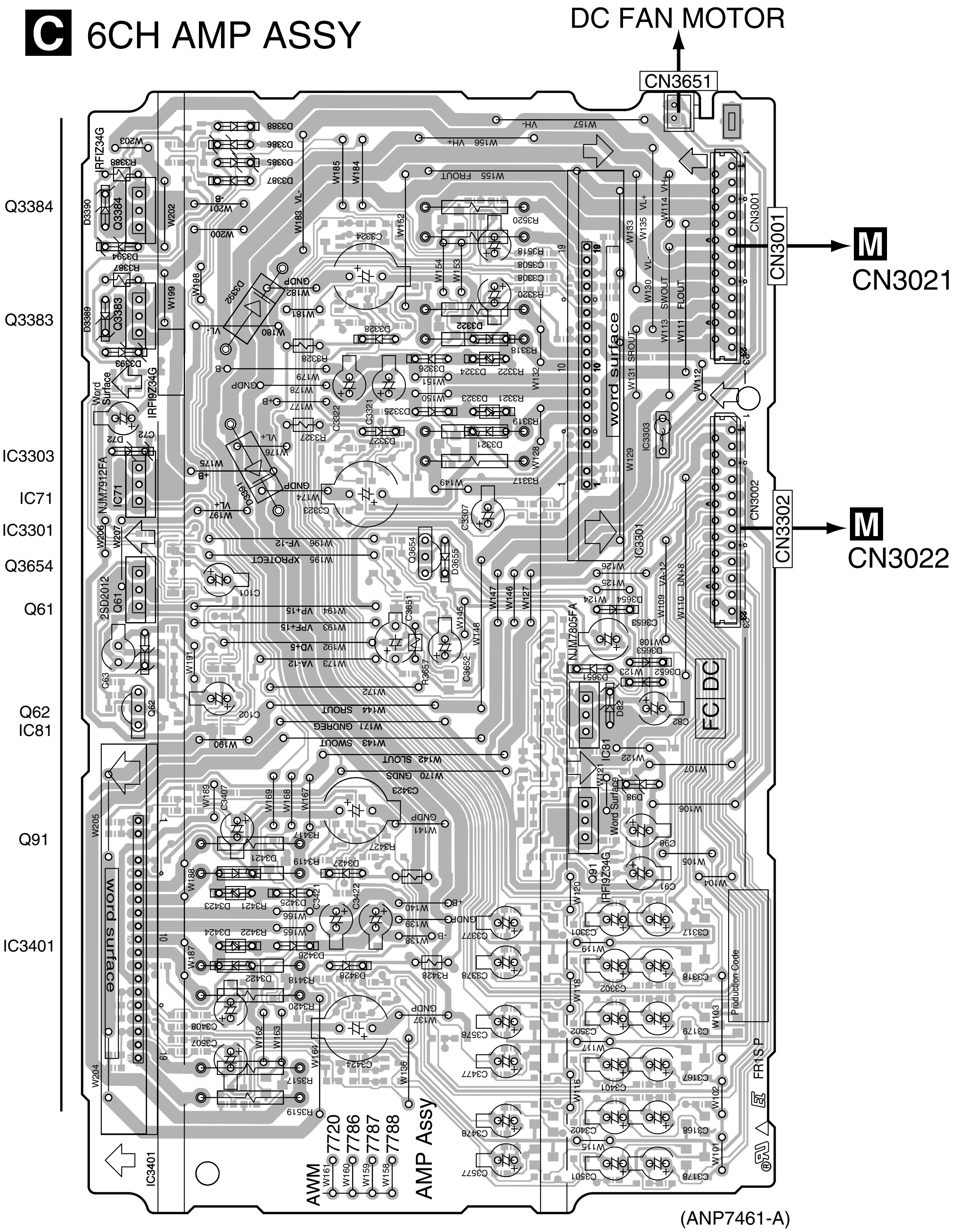
M AMP TRADE ASSY


CN3022
CN3021
CN3012
CN3011
AMP TRADE ASSY
XWZ3847-
R98
GNDA
CMK-P3X
UPSIDE
ATTENTION
EN CAS DE REMPLACEMENT DES
FUSIBLES IC25 N'UTILISER QUE
LA REFERENCE 491007 DE
CHEZ LITTELFUSE INC.
GNDREG
GNDP
491007
IC25
7A125V
1
23

(XNP3082-B)

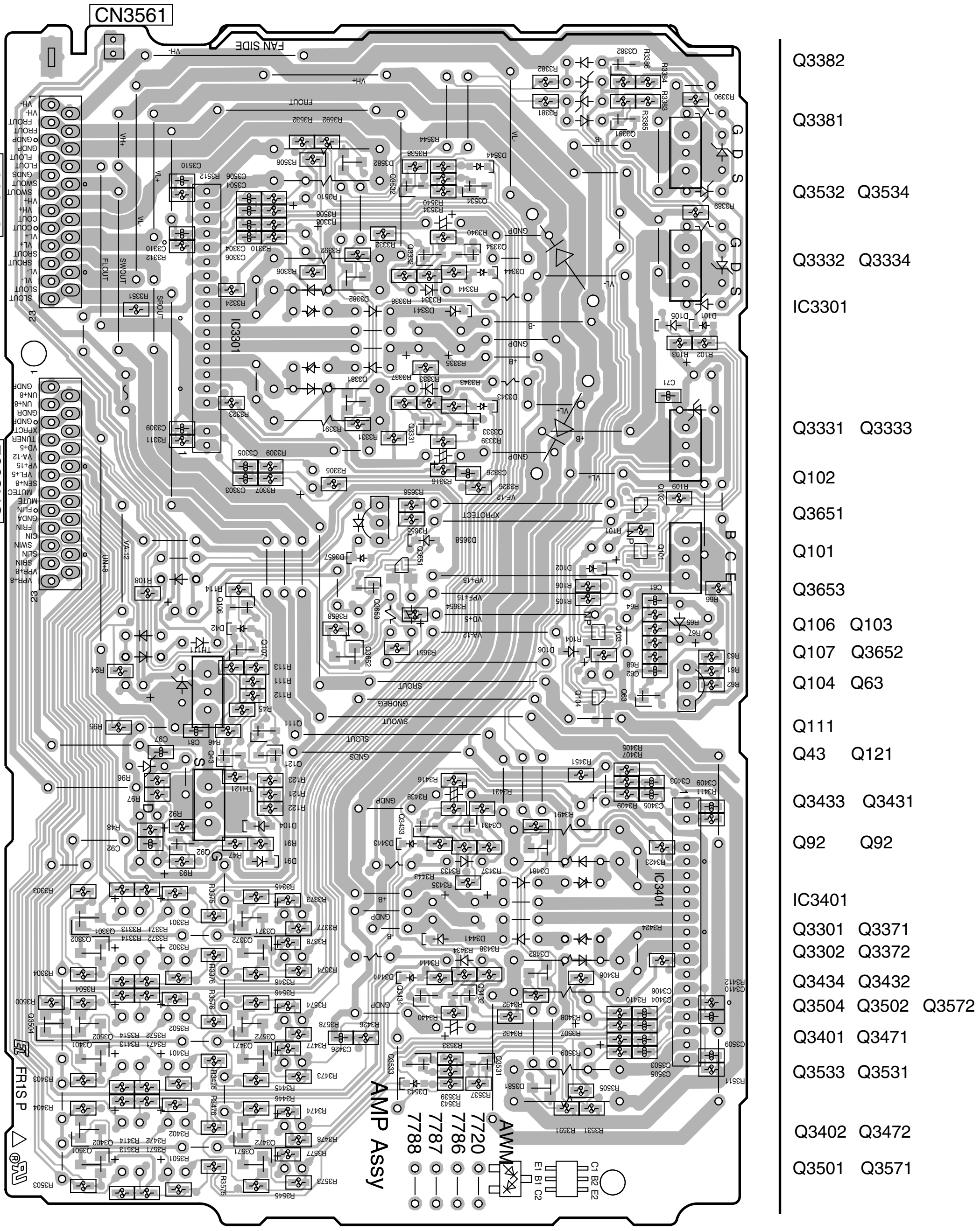
4.4 6CH AMP ASSY

SIDE A **SIDE A**


C 6CH AMP ASSY
DC FAN MOTOR
CN3651
Q3384
Q3383
IC3303
IC71
IC3301
Q3654
Q61
Q62
IC81
Q91
IC3401
CN3001
M
CN3021
CN3302
M
CN3022
word surface
FC DC
AWM
7720
7786
7787
7788
AMP Assy
FR1SP
Production Code
(ANP7461-A)

SIDE B **SIDE B**

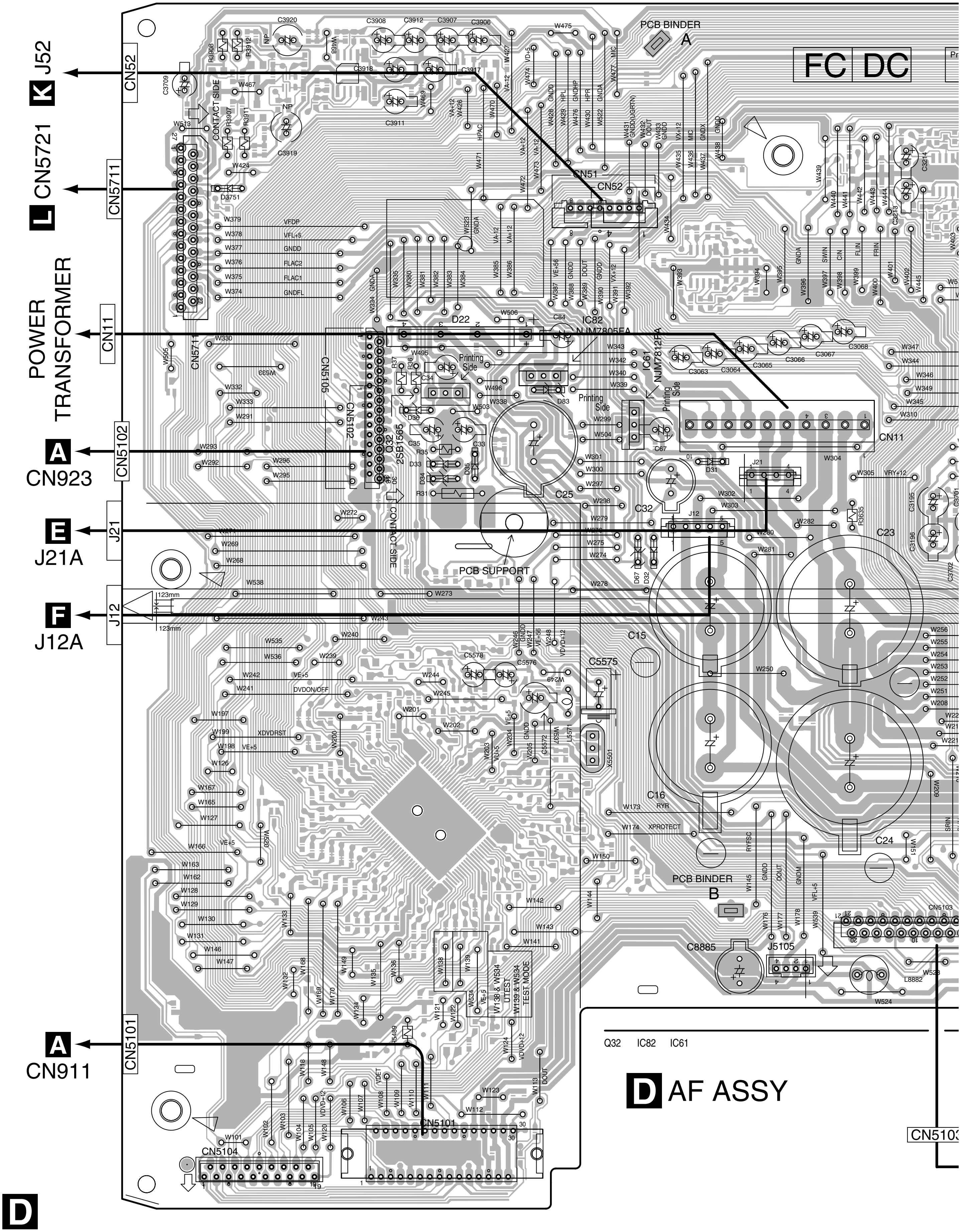
C 6CH AMP ASSY


CN3561
FAN SIDE
CN3001
CN3002
IC3301
IC3401
AMP Assy
AWM
7720
7786
7787
7788
FR1SP
G D S
G D S
B C E
Q3382
Q3381
Q3532 Q3534
Q3332 Q3334
IC3301
Q3331 Q3333
Q102
Q3651
Q101
Q3653
Q106 Q103
Q107 Q3652
Q104 Q63
Q111
Q43 Q121
Q3433 Q3431
Q92 Q92
IC3401
Q3301 Q3371
Q3302 Q3372
Q3434 Q3432
Q3504 Q3502 Q3572
Q3401 Q3471
Q3533 Q3531
Q3402 Q3472
Q3501 Q3571

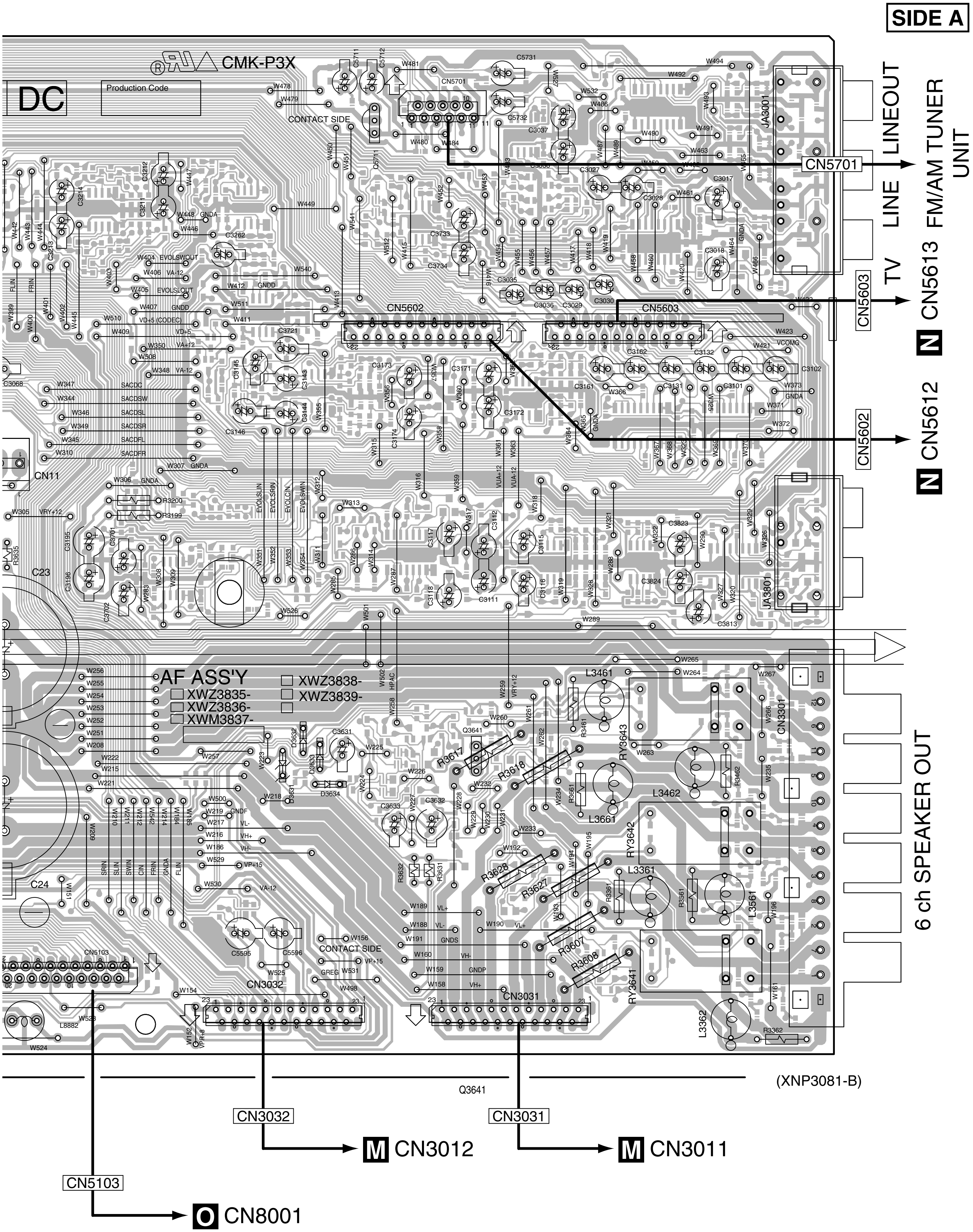
(ANP7461-A)

4.5 AF ASSY

SIDE A


K J52
CN52
L CN5721
CN5711
POWER TRANSFORMER
CN11
A CN923
CN5102
E J21A
J21
F J12A
J12
A CN911
CN5101
PCB BINDER A
FC DC
CN51
CN52
D22
IC82 NJM7805FA
IC61 NJM7812FA
CN5105
CN5102
Q32 2SB1565
CONTACT SIDE
Printing Side
C25
C32
CN11
J21
J12
PCB SUPPORT
C23
C15
C5575
C16
C24
PCB BINDER B
C8885
J5105
CN5103
L8882
X5501
W138 & W534 UTEST
W139 & W534 TEST MODE
123mm
Q32 IC82 IC61
D AF ASSY
CN5103
CN5101
CN5104
VFDP
VFL+5
GNDD
FLAC2
FLAC1
GNDFL
VE+5
DVDON/OFF
XDVDRST
RYR
XPROTECT
RYFSC
VRY+12

D


SIDE A
CMK-P3X
DC
Production Code
CONTACT SIDE
AF ASS'Y
☐ XWZ3835-
☐ XWZ3836-
☐ XWM3837-
☐ XWZ3838-
☐ XWZ3839-
CN5701
FM/AM TUNER UNIT
LINEOUT
LINE
TV
CN5603
N CN5613
CN5602
N CN5612
CN5602
CN5603
JA3001
JA3801
CN11
C23
C24
CN3301
6 ch SPEAKER OUT
RY3643
RY3642
RY3641
L3461
L3462
L3361
L3362
L3561
L3661
Q3641
R3617
R3618
R3628
R3627
R3607
R3608
CN5103
CN3032
CN3031
(XNP3081-B)
Q3641
CN3032
M CN3012
CN3031
M CN3011
CN5103
O CN8001

A

SIDE B

Q3004 Q3007
IC3001
Q3904
Q3907
Q3902
Q3906
IC3003
Q3201 Q3901
IC3901
IC3261 Q3010 Q3009
IC3201 Q3741
Q3903

B

IC3252
Q3006 Q3005
IC3731
IC3051
IC3241
Q3001
Q3002
Q3061
Q3171
Q3121
IC3062
Q3172 Q3131
IC3161
Q5573
IC3061 IC3131

C

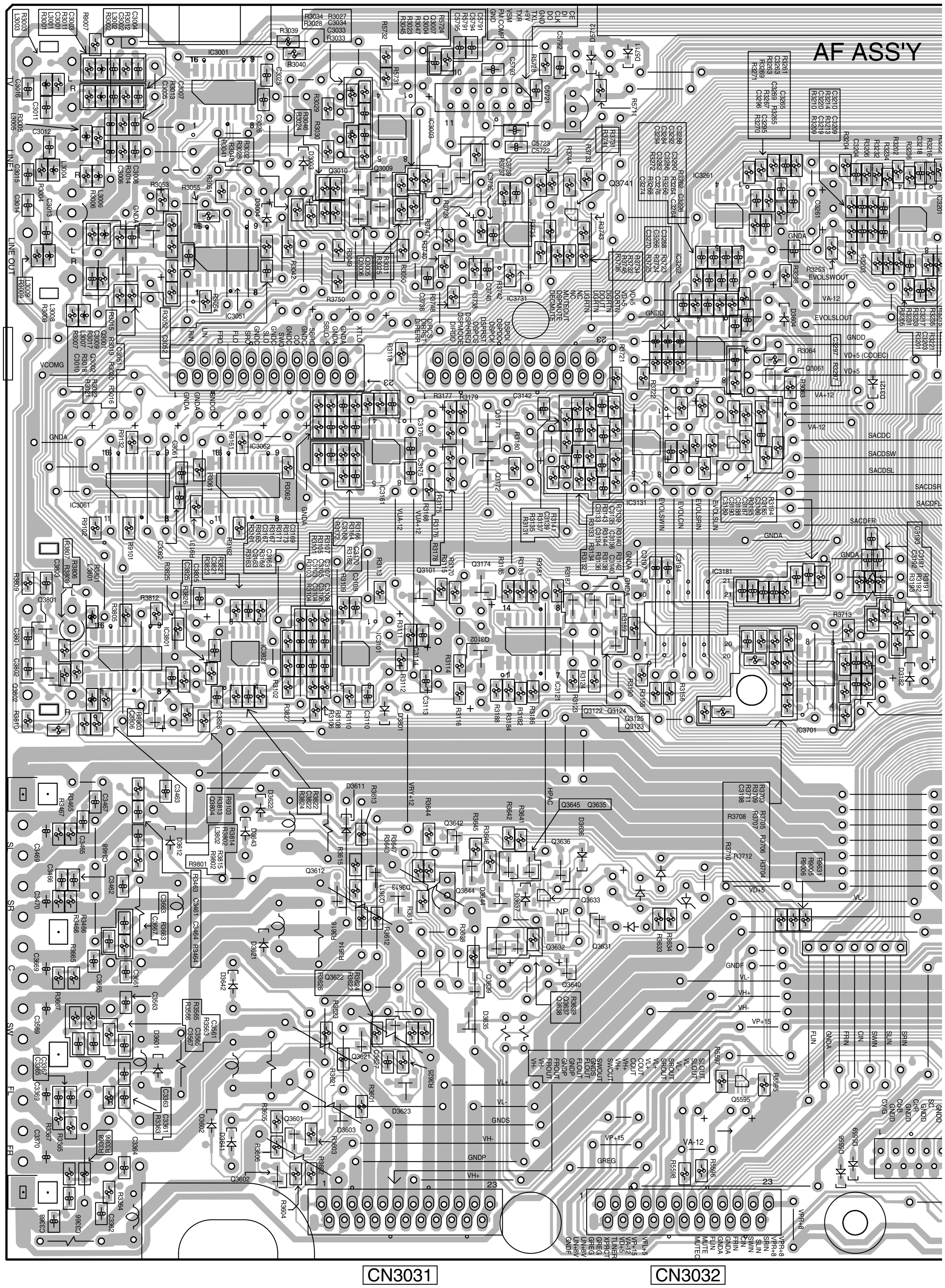
IC3181 Q3101 Q3174
Q3801 Q131
IC3801 IC3101 Q3102
IC3821
IC3121 Q3802
Q115 Q114
Q3122 Q3124 Q3125
IC3701 Q3123
Q3804
Q3645 Q3635 Q5571 Q5572

D

Q3642
Q3636
Q5501 Q5576
Q3612
Q3644
Q3611 Q3633
Q3632 Q3631
IC5501
Q3622 Q3639
Q3640
Q3638 Q3637
Q3803
Q5580
Q5578
Q3621
Q5575

E

Q5595
Q3601
Q5581
Q3602
Q3003
Q3905
Q5579
Q5577


AF ASS'Y
LINE IN
LINE OUT
VCOMG
GNDA
GNDD
EVOLSWOUT
EVOLSLOUT
VD+5 (CODEC)
VA+12
VA-12
SACDC
SACDSW
SACDSL
SACDSR
SACDFL
SACDFR
VP+15
VH+
VH-
VL+
VL-
GNDS
GNDP
GREG
NP
CN3031
CN3032

D AF ASSY

F

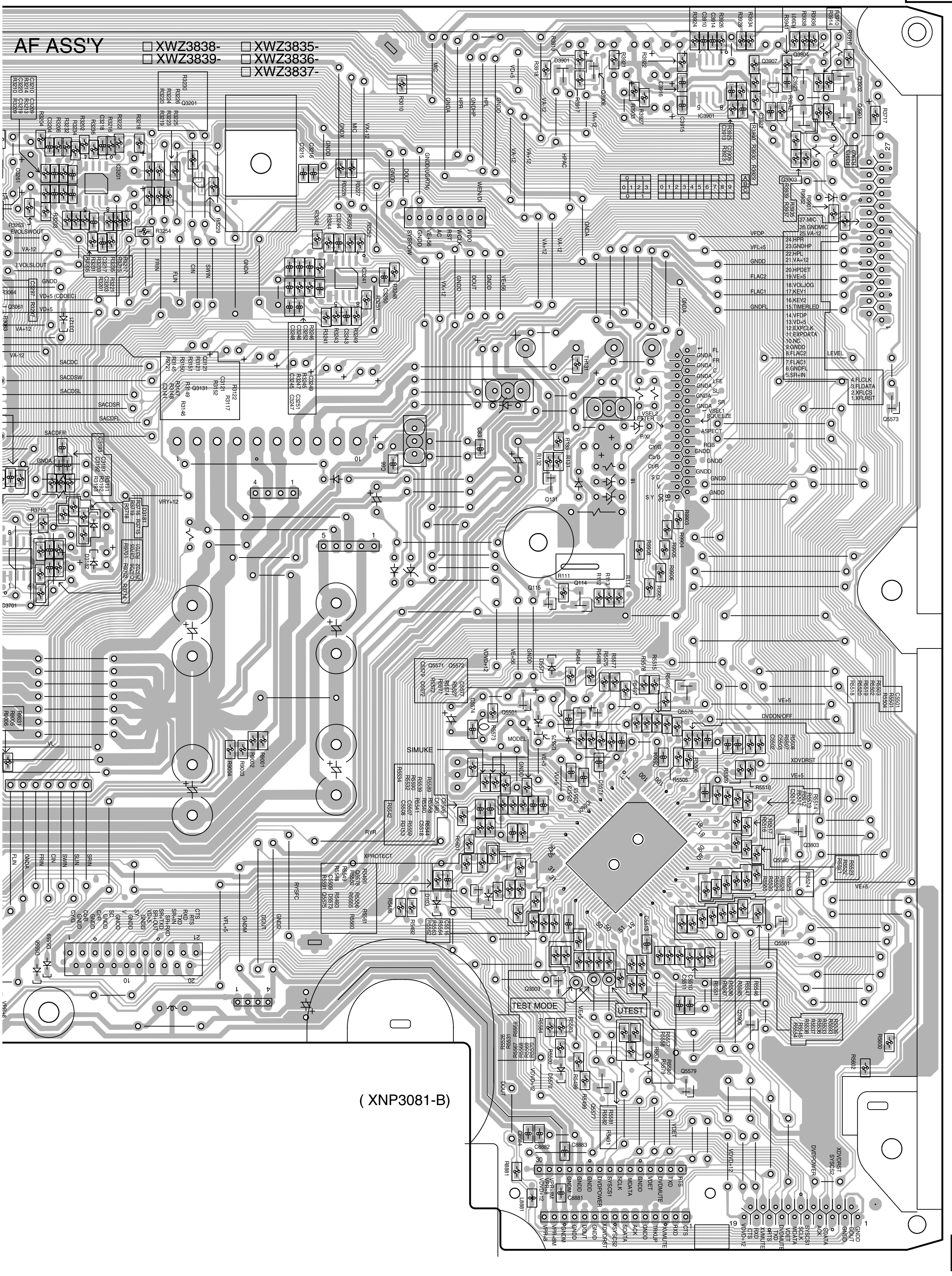
D

SIDE B

A

AF ASS'Y

☐ XWZ3838- ☐ XWZ3835-
☐ XWZ3839- ☐ XWZ3836-
☐ XWZ3837-



SIMUKE
TEST MODE
UTEST
MODEL
XPROTECT
VFDP
VFL+5
GNDD
FLAC2
FLAC1
GNDFL
LEVEL
DVDON/OFF
XDVDRST
VE+5
SACDC
SACDSW
SACDSL
SACDSR
SACDFL
SACDFR
EVOLSWOUT
EVOLSLOUT
VD+5 (CODEC)
VRY+12

(XNP3081-B)

B

C

D

E

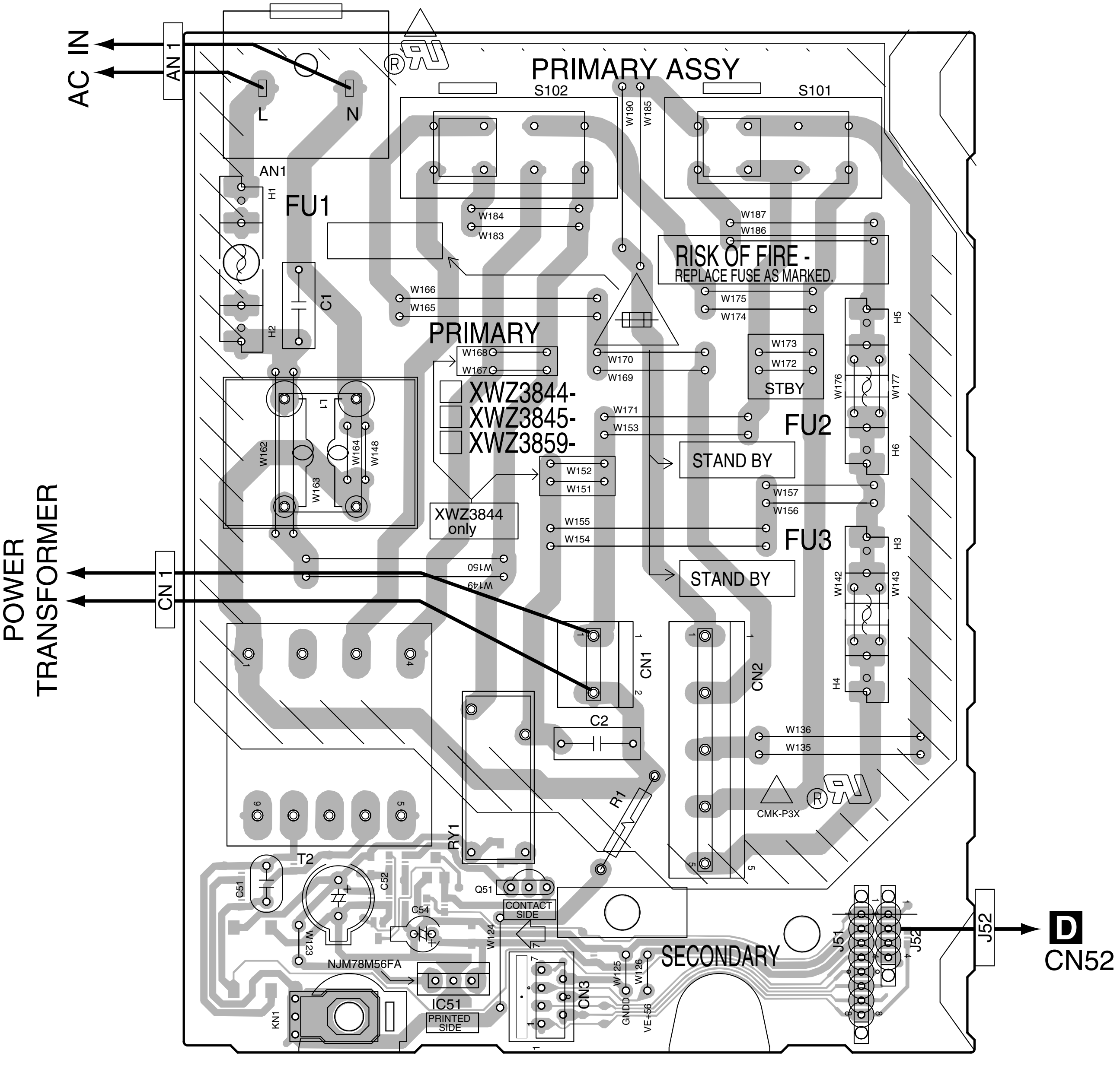
F

D

4.6 PRIMARY and VIDEO JACK ASSYS

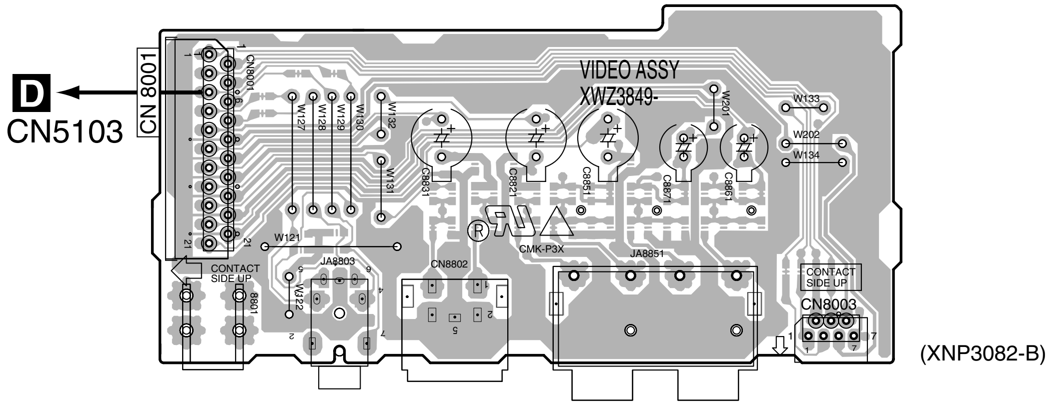
SIDE A **SIDE A**

K PRIMARY ASSY


AC IN
AN 1
POWER TRANSFORMER
CN 1
PRIMARY ASSY
S102
S101
L
N
AN1
H1
H2
FU1
C1
W190
W185
W184
W183
W187
W186
RISK OF FIRE -
REPLACE FUSE AS MARKED.
W166
W165
W175
W174
PRIMARY
W168
W167
W170
W169
W173
W172
STBY
H5
W176
W177
H6
L1
W162
W163
W164
W148
XWZ3844-
XWZ3845-
XWZ3859-
W171
W153
FU2
STAND BY
W152
W151
W157
W156
XWZ3844 only
W155
W154
FU3
H3
W150
W149
STAND BY
W142
W143
H4
CN1
CN2
C2
W136
W135
R1
RY1
CMK-P3X
T2
C51
C52
Q51
CONTACT SIDE
C54
W123
W124
NJM78M56FA
IC51
PRINTED SIDE
KN1
CN3
W125
W126
GNDD
VE+56
SECONDARY
J51
J52
D
CN52

(XNP3082-B)

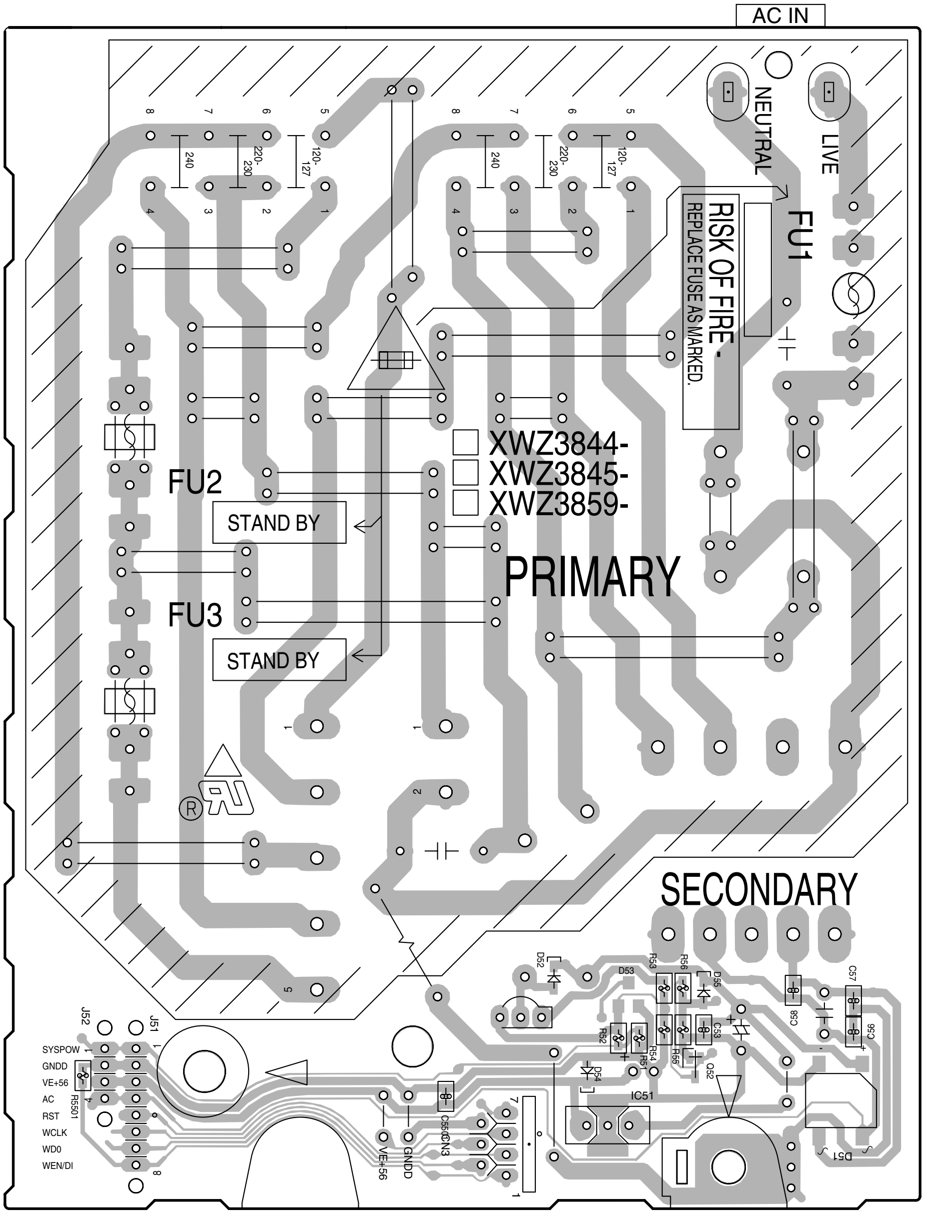
O VIDEO JACK ASSY


D
CN5103
CN 8001
CN8001
VIDEO ASSY
XWZ3849-
W127
W128
W129
W130
W132
W131
W201
W133
W202
W134
C8831
C8821
C8851
C8871
C8861
W121
W122
CONTACT SIDE UP
JA8803
CN8802
CMK-P3X
JA8851
CONTACT SIDE UP
CN8003

(XNP3082-B)

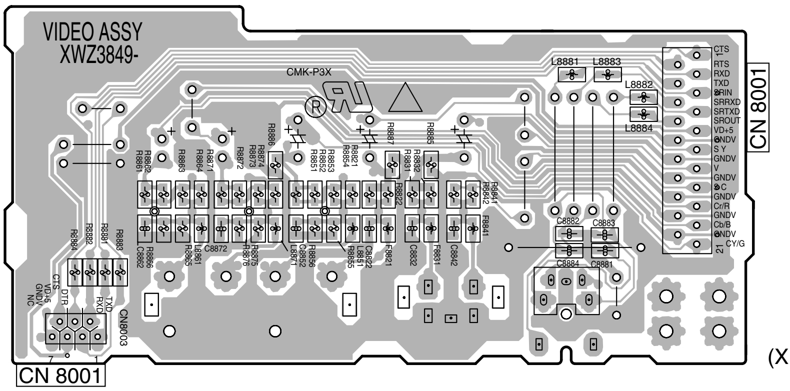
K O **K O**

K PRIMARY ASSY


AC IN
NEUTRAL
LIVE
FU1
RISK OF FIRE -
REPLACE FUSE AS MARKED.
8 7 6 5
240
220-230
120-127
4 3 2 1
XWZ3844-
XWZ3845-
XWZ3859-
FU2
STAND BY
FU3
STAND BY
PRIMARY
SECONDARY
D52
D53
R53
R56
D55
C58
C57
C59
R52
R51
R54
R55
C53
Q52
D54
IC51
D51
J52
J51
SYSPOW
GNDD
VE+56
AC
RST
WCLK
WD0
WEN/DI
R5501
C5501
CN3
VE+56
GNDD

(XNP3082-B)

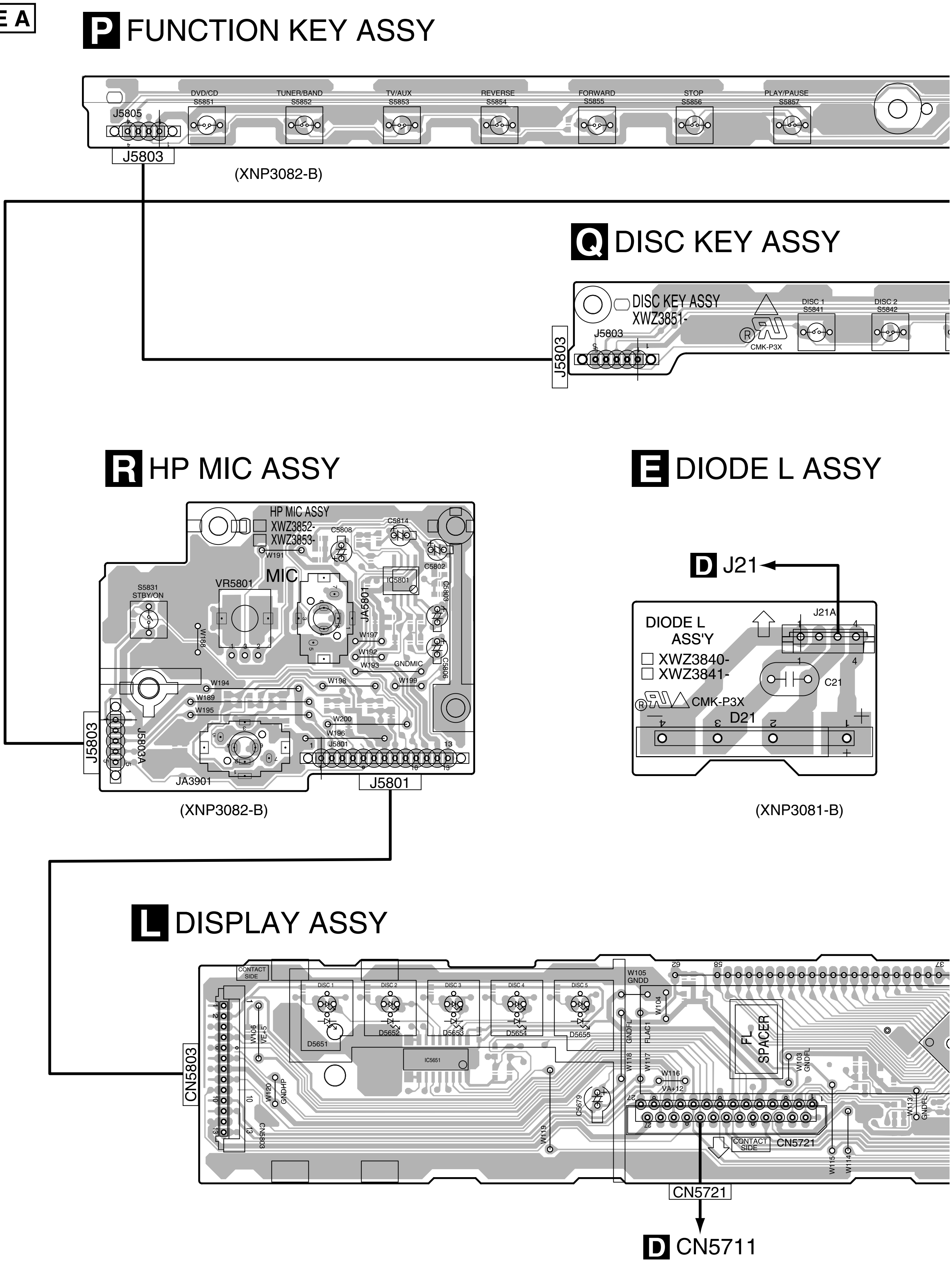
O VIDEO JACK ASSY


VIDEO ASSY
XWZ3849-
CMK-P3X
L8881
L8883
L8882
L8884
CN 8001
CTS
RTS
RXD
TXD
SRIN
SRRXD
SRTXD
SROUT
VD+5
GNDV
S Y
GNDV
V
GNDV
S C
GNDV
Cr/R
GNDV
Cb/B
GNDV
CY/G
C8882
C8883
C8884
C8881
CN8003
CN 8001
CTS
VD+5
GNDV
NC
DTR
RXD
TXD

(XNP3082-B)

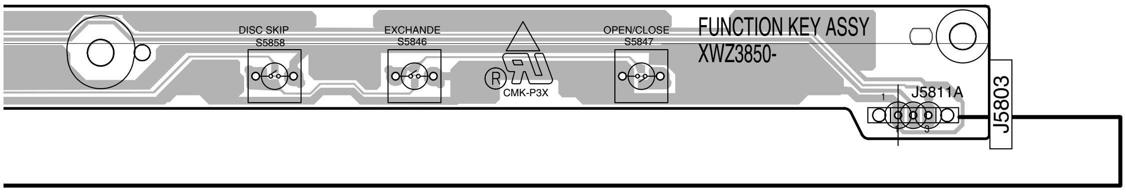
4.7 DISPLAY, DIODE L, DIODE S, FUNC KEY, DISC KEY, HP MIC and JOG ASSYS

SIDE A


P FUNCTION KEY ASSY
DVD/CD S5851
TUNER/BAND S5852
TV/AUX S5853
REVERSE S5854
FORWARD S5855
STOP S5856
PLAY/PAUSE S5857
J5805
J5803
(XNP3082-B)
Q DISC KEY ASSY
DISC KEY ASSY
XWZ3851-
J5803
CMK-P3X
DISC 1 S5841
DISC 2 S5842
J5803
R HP MIC ASSY
HP MIC ASSY
XWZ3852-
XWZ3853-
C5814
C5808
W191
C5802
MIC
VR5801
IC5801
S5831 STBY/ON
C5803
JA5801
W188
W197
W192
W193
GNDMIC
C5806
W194
W198
W199
W189
W195
W200
W196
J5803A
J5801
J5803
JA3901
J5801
(XNP3082-B)
E DIODE L ASSY
D J21
J21A
DIODE L ASS'Y
☐ XWZ3840-
☐ XWZ3841-
C21
CMK-P3X
D21
(XNP3081-B)
L DISPLAY ASSY
CONTACT SIDE
DISC 1
DISC 2
DISC 3
DISC 4
DISC 5
D5651
D5652
D5653
D5654
D5655
IC5651
W105 GNDD
W104
GNDFL
FLAC1
W118
W117
W116
VA+12
W106
VE+5
W120
GNDHP
CN5803
C5679
W119
FL SPACER
W103 GNDFL
W113 GNDFL
CONTACT SIDE
CN5721
W115
W114
CN5721
D CN5711

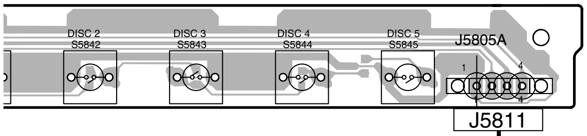
E L P Q R

SIDE A


DISC SKIP
S5858
EXCHANDE
S5846
OPEN/CLOSE
S5847
FUNCTION KEY ASSY
XWZ3850-
CMK-P3X
J5811A
1
3
J5803

(XNP3082-B)

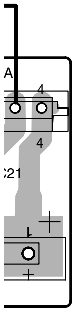
Y


DISC 2
S5842
DISC 3
S5843
DISC 4
S5844
DISC 5
S5845
J5805A
1
4
J5811

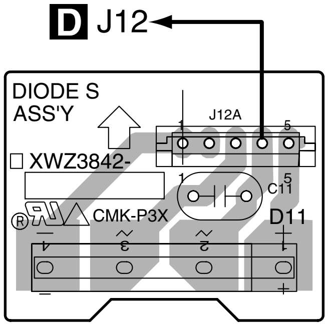
SSY

F DIODE S ASSY

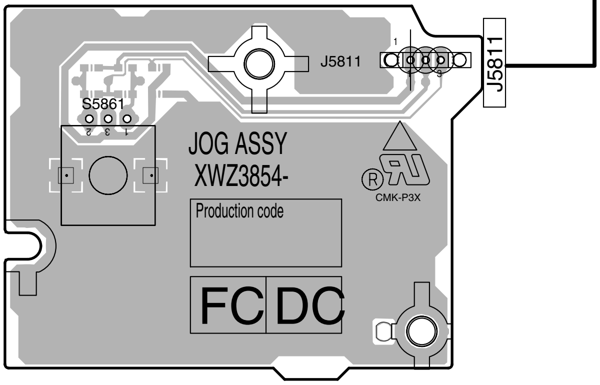
S JOG ASSY



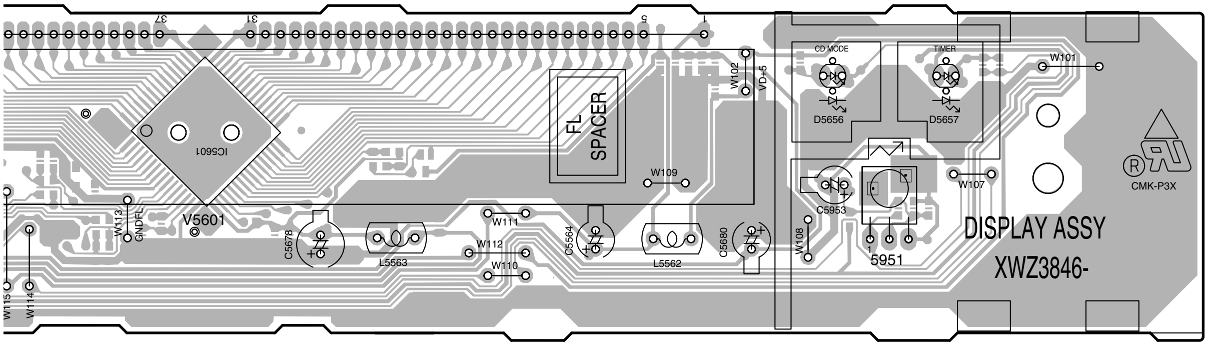
B)


D J12
DIODE S
ASS'Y
J12A
1
5
XWZ3842-
CMK-P3X
C11
D11
4
3
2
1

(XNP3081-B)


J5811
1
3
J5811
S5861
2 3 1
JOG ASSY
XWZ3854-
Production code
CMK-P3X
FC
DC

(XNP3082-B)

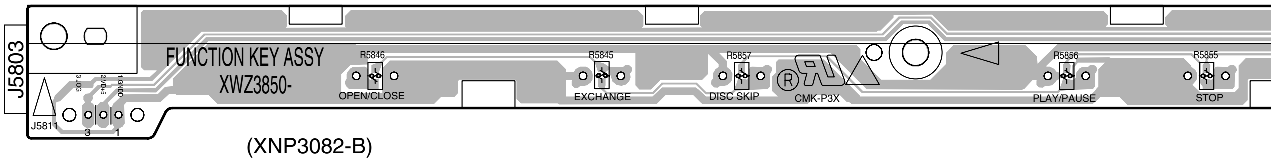

37
31
5
1
IC5601
FL
SPACER
W102
VD+5
CD MODE
TIMER
W101
D5656
D5657
W109
W107
CMK-P3X
C5953
V5601
W113
GNDFL
W111
W112
W110
C5678
L5563
C5564
L5562
C5680
W108
5951
DISPLAY ASSY
XWZ3846-
W115
W114

(XNP3082-B)

F L P Q S

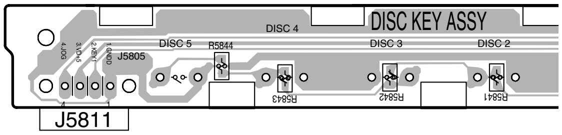
SIDE B

P FUNCTION KEY ASSY

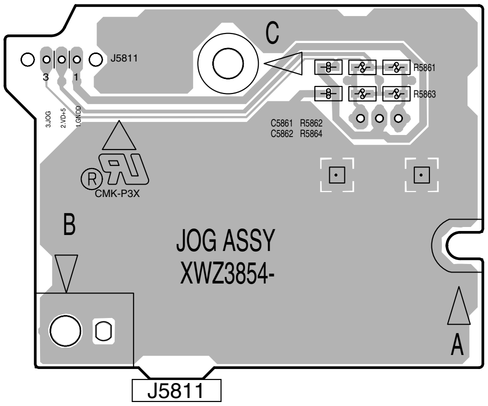

J5803
FUNCTION KEY ASSY
XWZ3850-
J5811
3.JOG
2.VD+5
1.GNDD
3
1
R5846
OPEN/CLOSE
R5845
EXCHANGE
R5857
DISC SKIP
CMK-P3X
R5856
PLAY/PAUSE
R5855
STOP

(XNP3082-B)

Q DISC KEY ASSY

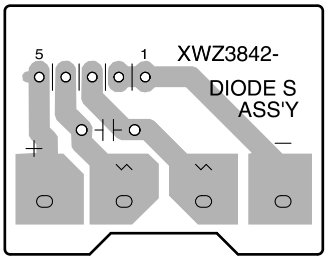

DISC KEY ASSY
DISC 4
DISC 5
DISC 3
DISC 2
4.JOG
3.VD+5
2.KEY
1.GNDD
J5805
R5844
R5843
R5842
R5841
J5811

S JOG ASSY


C
J5811
3
1
R5861
R5863
3.JOG
2.VD+5
1.GNDD
C5861
C5862
R5862
R5864
CMK-P3X
B
JOG ASSY
XWZ3854-
A
J5811

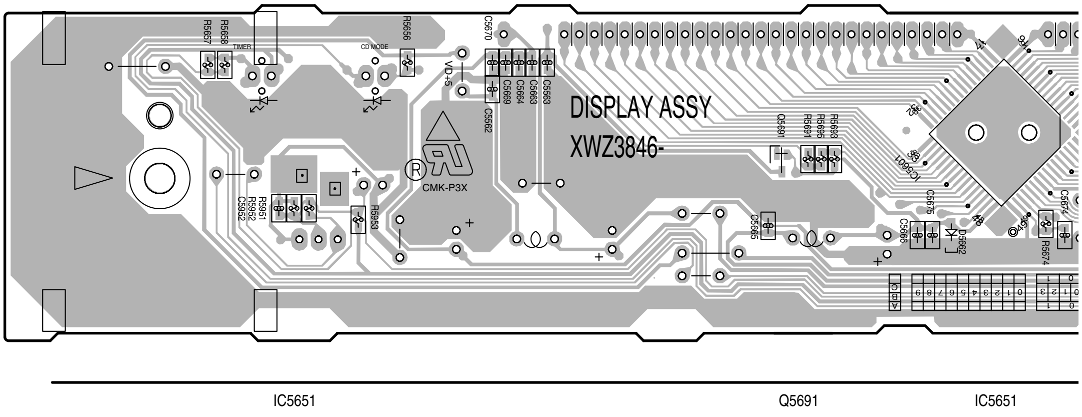
(XNP3082-B)

F DIODE S ASSY

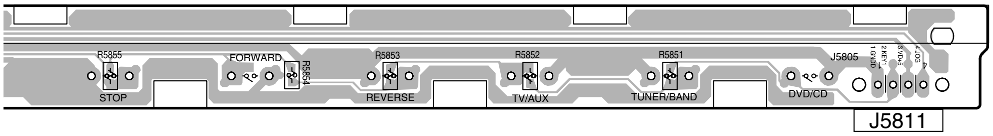

5
1
XWZ3842-
DIODE S
ASS'Y
+
—

(XNP3081-B)

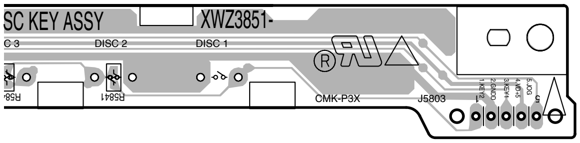
L DISPLAY ASSY


R5657
R5658
TIMER
CD MODE
R5656
C5670
VD+5
C5668
C5669
C5664
C5663
C5563
C5562
DISPLAY ASSY
XWZ3846-
CMK-P3X
R5951
R5952
C5952
R5953
Q5691
R5691
R5695
R5693
C5685
C5675
C5666
D5662
R5674
C5674
IC5601
IC5651
Q5691
IC5651

SIDE B


R5855
STOP
FORWARD
R5854
R5853
REVERSE
R5852
TV/AUX
R5851
TUNER/BAND
J5805
DVD/CD
1.GNDD
2.KEY1
3.VD+5
4.JOG
J5811

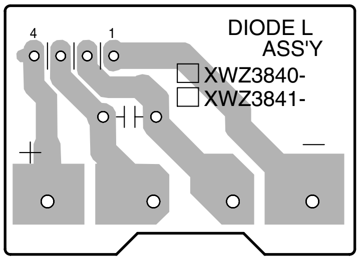
Y

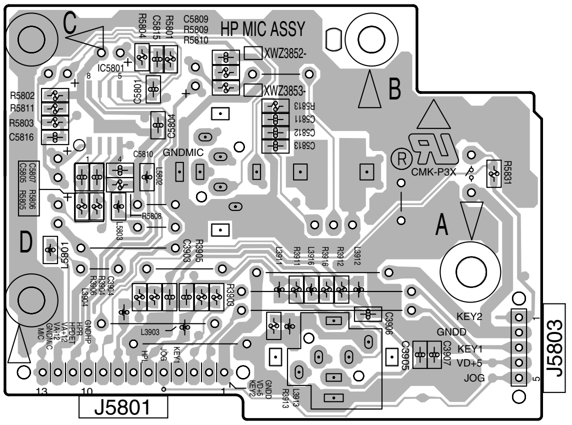

SC KEY ASSY
XWZ3851-
DISC 3
DISC 2
DISC 1
R5841
CMK-P3X
J5803
1.KEY2
2.GNDD
3.KEY1
4.VD+5
5.JOG

SSY

E DIODE L ASSY

R HP MIC ASSY

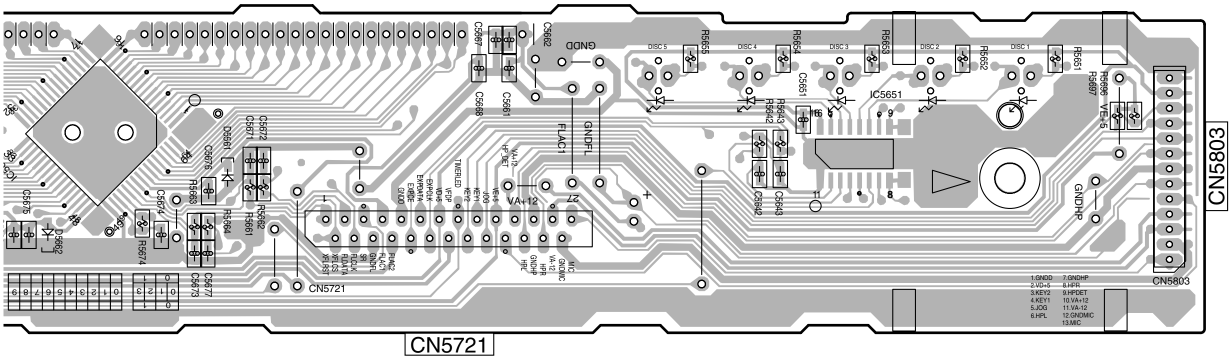

DIODE L
ASS'Y
XWZ3840-
XWZ3841-
4
1
+
—


HP MIC ASSY
XWZ3852-
XWZ3853-
C
B
A
D
IC5801
R5804
C5815
R5801
C5809
R5809
R5810
R5802
R5811
R5803
C5816
C5810
GNDMIC
R5808
CMK-P3X
R5831
KEY2
GNDD
KEY1
VD+5
JOG
J5803
J5801
13
10
1

B)

(XNP3081-B)

(XNP3082-B)


C5667
C5662
GNDD
C5668
C5661
DISC 5
R5655
DISC 4
R5654
DISC 3
R5653
DISC 2
R5652
DISC 1
R5651
C5651
IC5651
R5696
R5697
VA+5
FLAC1
GNDFL
C5672
C5671
C5676
D5661
R5663
R5662
R5664
R5661
C5675
C5674
R5674
D5662
C5677
C5673
VA+12
C5642
C5643
GNDHP
CN5803
CN5721
1.GNDD
2.VD+5
3.KEY2
4.KEY1
5.JOG
6.HPL
7.GNDHP
8.HPR
9.HPDET
10.VA+12
11.VA-12
12.GNDMIC
13.MIC

IC5651

(XNP3082-B)

E L P Q R

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*

● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

$560\,\Omega \rightarrow 56 \times 10^1 \rightarrow 561$ .... RD1/4PU$\boxed{5}\boxed{6}\boxed{1}$J
$47k\,\Omega \rightarrow 47 \times 10^3 \rightarrow 473$ .... RD1/4PU$\boxed{4}\boxed{7}\boxed{3}$J
$0.5\,\Omega \rightarrow R50$ .... RN2H$\boxed{R}\boxed{5}\boxed{0}$K
$1\,\Omega \rightarrow 1R0$ .... RS1P$\boxed{1}\boxed{R}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

$5.62k\,\Omega \rightarrow 562 \times 10^1 \rightarrow 5621$ .... RN1/4PC$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

LIST OF ASSEMBLIES

Mark	No. Description	Part No.
	1..DVDM ASSY	AWM7881
	1..DSP ASSY	AWX8523
	1..6CH AMP ASSY	AZW7283
NSP	1..MAIN ASSY	XWM3231
	2..AF ASSY	XWZ3835
	2..DIODE L ASSY	XWZ3840
	2..DIODE S ASSY	XWZ3842
	2..SSIB ASSY	XWZ3843
NSP	1..COMPLEX ASSY	XWM3236
	2..TRSB ASSY	XWZ3855
	2..SSRB ASSY	XWZ3856
	2..LOMB ASSY	XWZ3857
	2..PRIMARY ASSY	XWZ3844
	2..DISPLAY ASSY	XWZ3846
	2..AMP TRADE ASSY	XWZ3847
	2..DSP TRADE ASSY	XWZ3848
	2..VIDEO JACK ASSY	XWZ3849
	2..FUNCTION KEY ASSY	XWZ3850
	2..DISC KEY ASSY	XWZ3851
	2..HP MIC ASSY	XWZ3852
	2..JOG UNIT	XWZ3854
	1..FM/AM TUNER UNIT	AXX7172

A DVDM ASSY

SEMICONDUCTORS

Mark	No. Description	Part No.
	IC151	BA5912AFP-Y
	IC602	HY57V641620HGT-H
	IC101	M63018FP
⚠	IC431	MM1565AF
	IC501	MM1623BF
⚠	IC421	PQ018EH01ZP
⚠	IC411	PQ018EZ01ZP
⚠	IC441	PQ20WZ11
⚠	IC401	R1224N102H
	IC601	STM5589CVS
	IC301	STM6316ATPAZ
	IC911	TC74VHC08FT
	IC901	TC74VHCT125AFT
	IC604	TC7WU04FU
	IC603	VYW2195
	Q192, Q194, Q390	2SA1576A

Mark	No. Description	Part No.
⚠	Q451	2SA1576A
	Q923, Q924, Q926	2SA1576A
	Q191, Q193, Q202, Q212, Q452	2SC4081
	Q921	DTA124EUA
	Q951	DTC114TUA
	Q724, Q977	DTC114YUA
	Q922, Q925	DTC124EUA
	Q201, Q211	HN1A01F
	Q911	RN1903
	Q603	RN4982
⚠	Q401	RSQ035P03
	D431, D432	1SR154-400
	D402, D403, D922-D927	1SS355
	D603	RB501V-40
	D401	RSX201L-30
	D921	UDZS4.7B

COILS AND FILTERS

Mark	No. Description	Part No.
	L401 Power Inductor	ATH7011
	L100, L111, L623 Chip Beads	ATL7010
	L402 Inductor	CTH1254
	L390	LCYA2R7J2520

CAPACITORS

Mark	No. Description	Part No.
	C408	CCSRCH121J50
	C390	CCSRCH180J50
	C142	CCSRCH221J50
	C200	CCSRCH331J50
	C690	CCSRCH470J50
	C392	CCSRCH560J50
	C393, C640, C644	CCSRCH7R0D50
	C452	CEVW100M16
	C101, C151, C401, C404, C410	CEVW101M16
	C412, C422, C443, C561, C564	CEVW101M16
	C600, C621, C660	CEVW101M16
	C415, C425	CEVW101M4
	C201, C211	CEVW470M16
	C406	CKSQYB104K25
	C431	CKSQYB105K16
	C433	CKSQYB225K10
	C127, C128, C381, C562, C563	CKSRYB102K50
	C624	CKSRYB102K50
	C103, C112-C114, C124, C125	CKSRYB103K50
	C130, C133, C134, C155, C158	CKSRYB103K50
	C172, C182, C355	CKSRYB103K50
	C102, C132, C139, C152	CKSRYB104K16
	C160, C161, C163, C174, C176	CKSRYB104K16

Mark	No. Description	Part No.
	C230, C232, C233, C300, C307	CKSRYB104K16
	C309, C315, C318, C323, C326	CKSRYB104K16
	C335, C342, C348, C357, C362	CKSRYB104K16
	C373, C377, C388, C391	CKSRYB104K16
	C413, C414, C423, C424	CKSRYB104K16
	C441, C442, C451, C511, C531	CKSRYB104K16
	C551, C565, C571, C604, C607	CKSRYB104K16
	C614, C619, C622, C623	CKSRYB104K16
	C626-C632, C636, C637, C641	CKSRYB104K16
	C647-C649, C659, C664, C671	CKSRYB104K16
	C681, C684, C694, C698, C902	CKSRYB104K16
	C912, C921	CKSRYB104K16
	C501, C521, C541, C603, C620	CKSRYB105K10
	C625	CKSRYB105K10
	C394	CKSRYB152K50
	C126, C346	CKSRYB223K50
	C202, C205, C212, C215	CKSRYB472K50
	C402, C403, C405, C409 (10/16V)	DCH1165

RESISTORS

Mark	No. Description	Part No.
	R201	RAB4C220J
	R211	RAB4C390J
	R1011-R1013, R151, R210	RS1/10S0R0J
	R387-R389, R412-R415, R417	RS1/10S0R0J
	R421, R422, R561, R600	RS1/10S0R0J
	R403	RS1/10S100J
	R105, R106, R115-R120	RS1/10S4R7J
	R104, R107	RS1/10S6R8J
	R125, R144, R169, R172-R176	RS1/16S1002F
	R179, R182, R330, R331, R628	RS1/16S1002F
	R635	RS1/16S1002F
	R168	RS1/16S1102F
	R301	RS1/16S1202F
	R502, R512, R522, R532, R542	RS1/16S1500F
	R552	RS1/16S1500F
	R408	RS1/16S1502F
	R178	RS1/16S1602F
	R410	RS1/16S1802F
	R443	RS1/16S2001F
	R409	RS1/16S2702F
	R441	RS1/16S4701F
	R101, R102, R123, R142, R143	RS1/16S5600F
	R442	RS1/16S6801F
	R411	RS1/8S0R0J
	Other Resistors	RS1/16S###J

OTHERS

Mark	No. Description	Part No.
	CN123 PH Connector	B2B-PH-SM3
	7P Flexible Cable	VDA1681
	CN124 8P FFC Connector	VKN1412
	CN122 17P FFC Connector	VKN1421
	CN923 18P FFC Connector	VKN1422
	CN121 24P FFC Connector	VKN1464
	CN911 B to B Connector	VKN1626
	X601 (27MHz)	VSS1172
	X301 (20MHz)	VSS1186

B DSP ASSY

SEMICONDUCTORS

Mark	No. Description	Part No.
	IC8201	AK4114VQ
	IC8401	AK4628VQ
	IC8501	DSPD56367PV150
	IC8901	NJM2391DL1-33
	IC8902	NJU7223DL1-18
	IC8101	TC74HCU04AF
	IC8701	TC74LVX244FT
	IC8702	TC74VHCT244AFT
	IC8502	TC7WU04FU
	Q8504	UMD2N
	Q8503	UN5112
	D8501	1SS355
	D8401	DAN202K
	D8402, D8502, D8503	DAP202K

COILS AND FILTERS

Mark	No. Description	Part No.
	L8002, L8004, L8501, L8502	ATL7002
	Chip Solid Inductor	
	L8101, L8103, L8201, L8203, L8204	QTL1013
	Chip Solid Inductor	
	L8401, L8402, L8504, L8701, L8702	QTL1013

CAPACITORS

Mark	No. Description	Part No.
	C8209, C8210	CCSRCH100D50
	C8421	CCSRCH101J50
	C8106	CCSRCH221J50
	C8107	CCSRCH470J50
	C8007, C8008, C8109, C8201, C8212	CCSRCH471J50
	C8214, C8404, C8409-C8414	CCSRCH471J50
	C8416, C8417, C8419, C8505, C8507	CCSRCH471J50
	C8509, C8511, C8512, C8515, C8518	CCSRCH471J50
	C8520, C8522, C8524, C8526, C8528	CCSRCH471J50
	C8530, C8532, C8534, C8536, C8539	CCSRCH471J50
	C8541, C8543, C8545, C8551, C8703	CCSRCH471J50
	C8706	CCSRCH471J50
	C8548, C8549	CCSRCH8R0D50
	C8701, C8704	CEVW100M16
	C8105, C8406, C8415, C8546, C8547	CEVW101M16
	C8902, C8904	CEVW101M16
	C8217, C8225, C8408	CEVW470M6R3
	C8204, C8555	CKSRYB102K50
	C8009, C8104, C8405, C8418, C8517	CKSRYB103K50
	C8554	CKSRYB103K50
	C8010, C8202, C8207, C8213, C8215	CKSRYB104K16
	C8407, C8420, C8422, C8504, C8513	CKSRYB104K16
	C8521, C8523, C8525, C8527, C8529	CKSRYB104K16
	C8531, C8533, C8535, C8537, C8538	CKSRYB104K16
	C8540, C8542, C8544, C8550, C8702	CKSRYB104K16
	C8705, C8901, C8903	CKSRYB104K16
	C8110, C8516	CKSRYB105K6R3
	C8514	CKSRYB333K16
	C8203	CKSRYB473K50

RESISTORS

Mark	No. Description	Part No.
	R8506	RAB4C101J
	R8201	RS1/16S1802F
	Other Resistors	RS1/16S###J

OTHERS

Mark	No. Description	Part No.
	X8501 (20MHz)	VSS1171
	X8201 (24.576MHz)	XSS3003

Mark	No. Description	Part No.
	CN8003 13P Socket	AKP7070
	CN8007, CN8011 19P Socket	AKP7073
	JA8103 1P Pin Jack	VKB1159

C 6CH AMP ASSY

SEMICONDUCTORS

Mark	No. Description	Part No.
⚠	IC81	NJM7805FA
⚠	IC71	NJM7912FA
⚠	IC3301, IC3401	STK402-270
	Q3382, Q43	2SA1576A
	Q62	2SB1237X
	Q111, Q3381, Q63, Q92	2SC4081
⚠	Q61	2SD2012
	Q3301, Q3302, Q3401, Q3402	2SD2114K
	Q3501, Q3502, Q3504	2SD2114K
	Q3654	2SD2144S
	Q107, Q3653	DTA124EUA
	Q3652	DTA124TK
	Q106	DTC124EUA
⚠	Q3383, Q91	IRFI9Z34G
⚠	Q3384	IRFIZ34G
	Q3651	RN1901
	Q101, Q103	UMB1N
	Q102, Q104	UMH1N
⚠	D3321-D3326	1SR139-400
	D3327, D3328	1SR139-400
⚠	D3421-D3426	1SR139-400
	D3427, D3428	1SR139-400
	D3387, D3388, D3651-D3655	1SS133
	D101, D102, D104, D3657, D42	1SS355
⚠	D3391, D3392	30PDA20-FC6
⚠	D3381, D3382, D3481, D3482	DAN217
⚠	D3581, D3582	DAN217
	D3389, D3390	MTZJ10C
⚠	D98	MTZJ11B
⚠	D72	MTZJ15C
	D3393, D3394	MTZJ18B/C
⚠	D63	MTZJ18C
	D3385, D3386	MTZJ36A
⚠	D82	MTZJ7.5C
	D91	UDZS18B
	D105, D106, D3658	UDZS7.5B
	TH111	NCP18WF104J03RB

CAPACITORS

Mark	No. Description	Part No.
	C3305, C3306, C3405, C3406	CCSRCH221J50
	C3505, C3506, C62, C97	CCSRCH221J50
	C3309, C3310, C3409, C3410	CCSRCJ3R0C50
	C3509, C3510	CCSRCJ3R0C50
	C3307, C3308, C3407, C3408, C3508	CEAL100M16
	C3507	CEAL470M6R3
	C72	CEAT100M50
	C3651	CEAT101M25
	C101, C102	CEAT1R0M50
	C3323, C3324, C3423, C3424	CEAT221M50
	C3167, C3168, C3178, C3179	CEAT2R2M50
	C3301, C3302, C3317, C3318	CEAT2R2M50
	C3401, C3402, C3501, C3502	CEAT2R2M50
	C3652, C63, C82, C98	CEAT470M25
	C3653	CEAT470M35

Mark	No. Description	Part No.
	C3303, C3304, C3403, C3404	CKSRYB102K50
	C3503, C3504	CKSRYB102K50
	C92	CKSRYB104K16
	C71, C81	CKSRYB473K50

RESISTORS

Mark	No. Description	Part No.
	R3317-R3320, R3417-R3420	ACN7122
	R3517-R3520 (0.22/2W)	ACN7122
⚠	R3327, R3328, R3427, R3428	RD1/4MUF470J
	R3387, R3388	RD1/4PU101J
	R3657	RD1/4PU330J
	R96, R97	RS1/16S1002F
⚠	R3323, R3324, R3351, R3423, R3424	RS1/16S1R0J
⚠	R3451	RS1/16S1R0J
	R67, R68	RS1/16S2201F
	R94, R95	RS1/16S2701F
⚠	R62	RS1/16S330J
	R65	RS1/16S4700F
	R47, R48	RS1/16S4701F
	Other Resistors	RS1/16S###J

OTHERS

Mark	No. Description	Part No.
	CN3001, CN3002 23P Plug	AKP7064
	CN3651 2P Plug	KM200SA2

D AF ASSY

SEMICONDUCTORS

Mark	No. Description	Part No.
	IC3181	BD3814FV
	IC3003, IC3101, IC3131, IC3161, IC3201	HA17558AF
	IC3241, IC3252, IC3261, IC3731	HA17558AF
	IC3901	NJM4565M
⚠	IC82	NJM7805FA
⚠	IC61	NJM7812FA
	IC5501	PDC113A
	IC3001	TC4052BFN
	IC3121	TC4066BFN
	Q5576, Q5577	2SA1037K
	Q3906	2SA1576A
⚠	Q32	2SB1565
	Q131, Q3005, Q3006, Q3009, Q3010	2SC4081
	Q3601, Q3602, Q3611, Q3612	2SC4081
	Q3621, Q3622, Q3631, Q3637, Q3638	2SC4081
	Q3642, Q3644, Q5501, Q5572	2SC4081
	Q3641	2SD1858X
⚠	Q5711	2SD1858X
	Q114, Q3001, Q3002, Q3901-Q3904	2SD2114K
	Q115, Q3003, Q3004, Q3007, Q3061	DTA124EUA
	Q3121, Q3122, Q3124, Q3635, Q3639	DTA124EUA
	Q3645	DTA143EUA
	Q3123, Q3125, Q3636, Q3640, Q5575	DTC124EUA
	Q5578, Q5579	DTC124EUA
	Q5571, Q5573	DTC143EUA
	Q3633	RN1901
	Q5595	RN2901
	Q3632	UMB1N
	Q3741	XP4506
	D35, D3632-D3634	1SS133
⚠	D22	D5SBA20F20
	D3635	DAN202K
	D3644	DAN217

Mark	No. Description	Part No.
	D3603, D3613, D3623, D3901	DAP202K
	D103, D3601, D3602, D3604	MA111
	D3611, D3612, D3621, D3622	MA111
	D3636, D3637, D3641-D3643, D5556	MA111
	D5559, D5570, D5571, D5573, D5575	MA111
	D5712	MA111
	D33, D34	MTZJ16A
	D3631	MTZJ5.1A
	D36	MTZJ6.8B
	D83	MTZJ7.5C
⚠	D31, D32	S5688G
	D5711	UDZS10B
	D3003, D3004	UDZS6.2B
	D3181, D3182	UDZS6.8B
⚠	TH131	NCP18WF104J03RB

COILS AND FILTERS

Mark	No. Description	Part No.
	L3361, L3362, L3461, L3462, L3561	ATH-059
	L3661 AF Choke Coil	ATH-059
	L8882 Power Inductor	ATH7012
	L5571	LAU220J
	L8881 Chip Beads	VTL1075

SWITCHES AND RELAYS

Mark	No. Description	Part No.
	RY3641-RY3643	ASR7017

CAPACITORS

Mark	No. Description	Part No.
	C5575 (0.047F/5.5V)	ACH1246
	C23, C24 (5600uF/35V)	ACH7181
	C15, C16 (2200uF/63V)	ACH7182
	C25 (6800uF/25V)	ACH7183
	C3191-C3193, C3913, C3914	CCSRCH101J50
	C5510, C5511, C5577, C5722, C5723	CCSRCH101J50
	C3001-C3008	CCSRCH221J50
	C3103, C3104	CCSRCH331J50
	C3294, C3909, C3910	CCSRCH470J50
	C3109, C3110	CCSRCH680J50
	C3009, C3010, C3105, C3106	CCSRCH821J50
	C3139, C3140, C3169	CCSRCH821J50
	C3029, C3030, C3035, C3036, C5576	CEAL100M16
	C5572	CEAL101M6R3
	C5578	CEAL1R0M50
	C3919, C3920	CEANP470M16
	C3037, C3038, C3101, C3102	CEAT100M50
	C3115-C3118, C3131, C3132	CEAT100M50
	C3143-C3146, C3161, C3162	CEAT100M50
	C3171-C3174, C3213, C3214, C3262	CEAT100M50
	C35, C3633, C3701, C3702	CEAT100M50
	C3733, C3734, C3906, C3917, C3918	CEAT100M50
	C5711	CEAT100M50
	C34, C67, C84	CEAT220M50
	C3195, C3196	CEAT221M10
	C32	CEAT221M63
	C8885	CEAT222M10
	C3631	CEAT2R2M2A
	C33	CEAT330M50
	C3027, C3028, C3111, C3112	CEAT470M16
	C3211, C3212, C3911, C3912	CEAT470M16
	C3632	CEAT471M6R3
	C5595, C5596	CEJQ220M50
	C5504	CKSRYB102K50
	C3025, C3026, C3033, C3034	CKSRYB103K50

Mark	No. Description	Part No.
	C3113, C3114, C3141, C3142	CKSRYB103K50
	C3175, C3176, C3197, C3198	CKSRYB103K50
	C3209, C3210, C3249, C3250	CKSRYB103K50
	C3295-C3298, C3735, C3736	CKSRYB103K50
	C5506-C5508, C5518, C5571, C5573	CKSRYB103K50
	C5580, C5791	CKSRYB103K50
	C3014-C3016, C3185-C3188, C3288	CKSRYB104K16
	C3290, C5513-C5516, C5574	CKSRYB104K16
	C5794	CKSRYB105K10
	C3217, C3218	CKSRYB123K50
	C3133-C3136, C3163, C3165	CKSRYB152K50
	C3251, C3252, C3261	CKSRYB153K50
	C3276	CKSRYB222K50
	C3361-C3364, C3461-C3464, C3561	CKSRYB223K50
	C3563, C3661, C3663	CKSRYB223K50
	C3243, C3244, C3263	CKSRYB272K50
	C3266, C3282, C3292	CKSRYB273K16
	C3270	CKSRYB333K16
	C3268	CKSRYB334K10
	C3247, C3248	CKSRYB393K16
	C3269	CKSRYB393K25
	C3189, C3190	CKSRYB472K50
	C3284, C3286, C3365-C3368	CKSRYB473K50
	C3465-C3468, C3565, C3567, C3665	CKSRYB473K50
	C3667, C66, C83	CKSRYB473K50
	C3170	CKSRYB682K50
	C3245, C3246, C3265	CKSRYB683K16
	C3219, C3220	CKSRYB823K25

RESISTORS

Mark	No. Description	Part No.
	R3607, R3608, R3617, R3618	ACN7112
	R3627, R3628 (0.1 /2W)	ACN7112
	R3199, R3200	RD1/2PM151J
	R3361, R3362, R3461, R3462, R3561	RD1/2PMF101J
	R3661	RD1/2PMF101J
	R31	RD1/2PMF332J
	R36, R37	RD1/4PU101J
	R3907, R3908, R3911, R3912	RD1/4PU330J
	R3635	RD1/4PU332J
	R3631, R3632	RD1/4PU333J
	R35	RD1/4PU472J
	R5489	RD1/4PU473J
	R131	RS1/16S5600F
	R132	RS1/16S6800F
	Other Resistors	RS1/16S###J

OTHERS

Mark	No. Description	Part No.
	X5501 (10MHz)	ASS7034
	CN5701 11P FFC Connector	52045-1145
	CN5103 21P FFC Connector	52045-2145
	CN5711 27P FFC Connector	52045-2745
	CN52 4P Jumper Connector	52147-0410
	3001 6P Pin Jack	AKB7012
	CN3301 12P Speaker Terminal	AKE7097
	CN3031, CN3032, CN5602, CN5603 23P Plug	AKP7064
	CN11 10P-VH Connector	B10P-VH
	J21 Connector Ass'y	PF04NN-S22
	J12 Connector Ass'y	PF05NN-S22
	PCB Binder	VEF1040
	CN5102 18P FFC Connector	VKN1249

Mark	No.	Description	Part No.
	CN5101	B to B Conector 30P	VKN1627

E DIODE L ASSY

SEMICONDUCTORS

⚠	D21		D5SBA20(B)

F DIODE S ASSY

SEMICONDUCTORS

⚠	D11		D3SBA20(B)

G SSIB ASSY

OTHERS

	CN2	4P FFC Connector	VKN1264
	CN1	12P FFC Connector	VKN1272
	CN3	17P FFC Connector	VKN1277

H TRSB ASSY

RESISTORS

		Other Resistors	RS1/10S###J

OTHERS

	CN12	7P FFC Connector	VKN1267
	CN11	8P FFC Connector	VKN1268
		Reaf Switch	VSK1011

I SSRB ASSY

SEMICONDUCTORS

	Q21		2SC2412K
	Q22		DTC124EK
	PC21		GP2S28
	PC22		RPI-574

CAPACITORS

	C21		CKSQYB102K50

RESISTORS

		Other Resistors	RS1/10S###J

OTHERS

	CN21	7P FFC Connector	VKN1267
		Reaf Switch	VSK1011

J LOMB ASSY

CAPACITORS

	C31		CKSQYB102K50

OTHERS

	CN31	KR Connector	B2B-PH-K

K PRIMARY ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC51		NJM78M56FA
	Q52		2SC4081
	Q51		2SD1858X
	D53		DAN217
⚠	D51		DF06SA
	D52		MA111
	D55		UDZS20B

COILS AND FILTERS

⚠	L1	Line Filter	XTF3004

TRANSFORMERS

⚠	T2		ATT7079

SWITCHES AND RELAYS

⚠	RY1		XSR3008

CAPACITORS

⚠	C1, C2	(0.022uF/AC275V)	ACE7022
	C52		CEAT102M25
	C54		CEAT470M16
	C53		CKSRYB103K50
	C56-C58		CKSRYB473K50

RESISTORS

⚠	R1	(2.2M, 1/2W)	RCN1080
		Other Resistors	RS1/16S###J

OTHERS

		4P Cable Holder	51048-0400
	H1, H2	Fuse Clip	AKR7001
⚠	CN1	2P-VH Connector	B2P3-VH
	J52	Jumper Wire	D20PYY0420E
	KN1	Wrapping Terminal	VNF1084
⚠	AN1	1P AC Inlet	XKP3042

L DISPLAY ASSY

SEMICONDUCTORS

	IC5651		BU2090F
	IC5601		PT6302LQ-003
	Q5691		2SC4081
	D5651-D5657		MPG5064X

COILS AND FILTERS

	L5563		LFEA100J
	L5562		LFEA220J

CAPACITORS

	C5642, C5643		CCSRCH101J50
	C5674		CCSRCH470J50
	C5564		CEJQ101M6R3
	C5679, C5680		CEJQ1R0M50
	C5678		CEJQ220M35
	C5953		CEJQ470M16
	C5671-C5673, C5676		CKSRYB102K50
	C5677		CKSRYB103K50
	C5651		CKSRYB104K16
	C5562, C5563, C5665, C5666, C5675		CKSRYB223K50
	C5952		CKSRYB223K50

RESISTORS

		Other Resistors	RS1/16S###J

OTHERS

	CN5721	27P FFC Connector	52045-2745
	CN5803	13P Jumper Connector	52147-1310
	5671	FL Spacer	AEB7069
	5951	Remote Receiver Unit	GP1UM27XK

Mark	No.	Description	Part No.
	V5601	FL Tube	XAV3020

M AMP TRADE ASSY

SEMICONDUCTORS

⚠	IC25		AEK7047

RESISTORS

		Other Resistors	RS1/16S###J

OTHERS

	CN3011, CN3012, CN3021, CN3022	23P Socket	AKP7075

N DSP TRADE ASSY

RESISTORS

		Other Resistors	RS1/16S###J

OTHERS

	CN5621	13P Plug	AKP7059
	CN5622, CN5623	19P Plug	AKP7062
	CN5612, CN5613	23P Socket	AKP7075

O VIDEO JACK ASSY

COILS AND FILTERS

	L8881-L8884	Chip Solid Inductor	QTL1013
	L8861, L8871	Chip Beads	VTL1089

CAPACITORS

	C8822, C8832, C8842, C8852, C8862		CCSRCH470J50
	C8872		CCSRCH470J50
	C8821, C8831, C8851		CEAT102M6R3
	C8861, C8871		CEAT471M6R3

RESISTORS

	R8821, R8831, R8841, R8853, R8863		RS1/16S75R0F
	R8873		RS1/16S75R0F

OTHERS

	CN8001	21P FFC Connector	52044-2145
	CN8802	4P Mini DIN Socket	AKP7179
	JA8851	4P Pin Jack	VKB1168
	CN8003	7P FFC Connector	VKN1267
	JA8803	Mini Jack 4P	XKN3015

P FUNCTION KEY ASSY

SWITCHES AND RELAYS

	S5846, S5847, S5851-S5858		VSG1010

RESISTORS

Other ResistorsRS1/16S###J

OTHERS

		3P Cable Holder	51048-0300
		4P Cable Holder	51048-0400
	J5805	Jumper Wire	D20PYY0405E

Q DISC KEY ASSY

SWITCHES AND RELAYS

	S5841-S5845		VSG1010

Mark	No.	Description	Part No.

RESISTORS

		Other Resistors	RS1/16S###J

OTHERS

		4P Cable Holder	51048-0400
		5P Cable Holder	51048-0500
	J5803	Jumper Wire	D20PYY0510E

R HP MIC ASSY

SWITCHES AND RELAYS

	S5831		VSG1024

CAPACITORS

	C3906		CKSRYB103K50
	C3905, C3907		CKSRYB104K16
	C3903, C3904		CKSRYB223K50

RESISTORS

		Other Resistors	RS1/16S###J

OTHERS

		5P Cable Holder	51048-0500
		13P Cable Holder	51048-1300
	JA3901	Mini Jack	AKN7005
	J5801	Jumper Wire	D20PYY1310E

S JOG ASSY

SWITCHES AND RELAYS

	S5861		XSX3007

CAPACITORS

	C5861		CKSRYB102K50
	C5862		CKSRYB104K16

RESISTORS

		Other Resistors	RS1/16S###J

OTHERS

		3P Cable Holder	51048-0300
	J5811	Jumper Wire	D20PYY0310E

FM/AM TUNER UNIT

FM/AM TUNER UNIT has no service part.

6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Items

[Mechanism Part]

❶ Tangential and Radial Height Coarse Adjustment

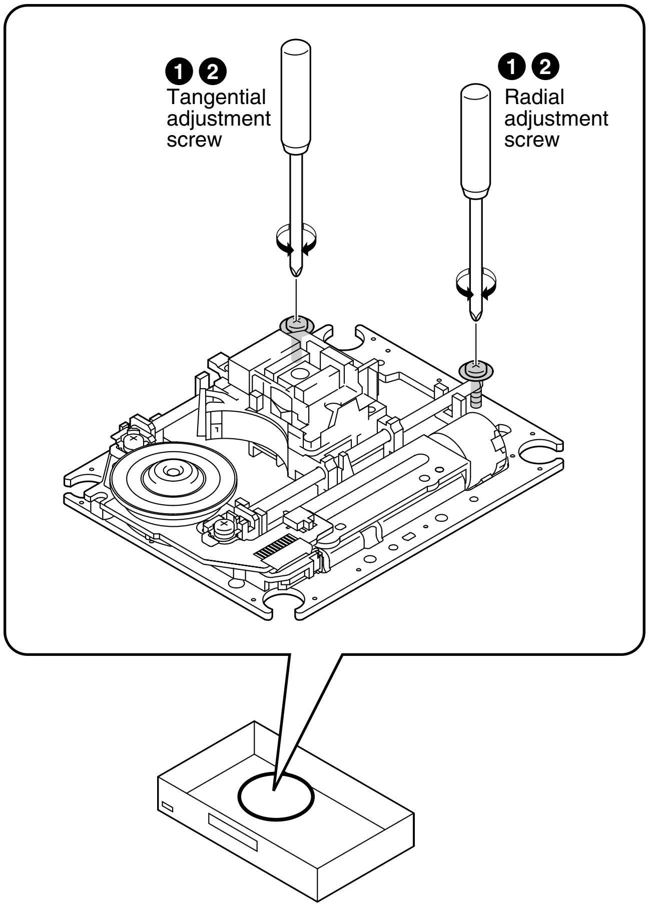
❷ DVD Jitter Adjustment

[Electrical Part]

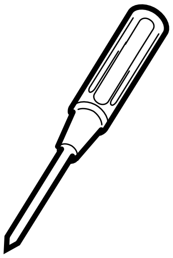
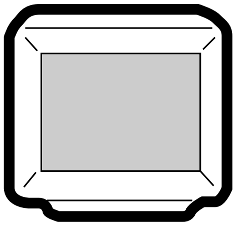
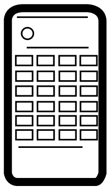
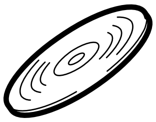
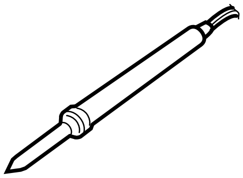
Electrical adjustments are not required.

■ Adjustment Points (Mechanism Part)

Cautions: After adjustment, adjustment screw locks with the Screw tight.



6.2 JIGS AND MEASURING INSTRUMENTS

 ⊕ Screwdriver (large)	 ⊕ Screwdriver (medium)	 TV monitor	 Test mode remote control unit (GGF1381)
 ⊕ Precise screwdriver	 DVD test disc (GGV1025)	 Soldering iron	Screw tight (GYL1001)

6.3 NECESSARY ADJUSTMENT POINTS

Exchange Parts of Mechanism Assy

When		Adjustment Points
Exchange the Pickup	**Mechanical point**	❶, ❷ ＊ After adjustment, screw locks with the Screw tight.
	Electric point	————
Exchange the Traverse Mechanism	**Mechanical point**	————
	Electric point	————
Exchange the Spindle Motor	**Mechanical point**	❷ ＊ After adjustment, screw locks with the Screw tight.
	Electric point	————

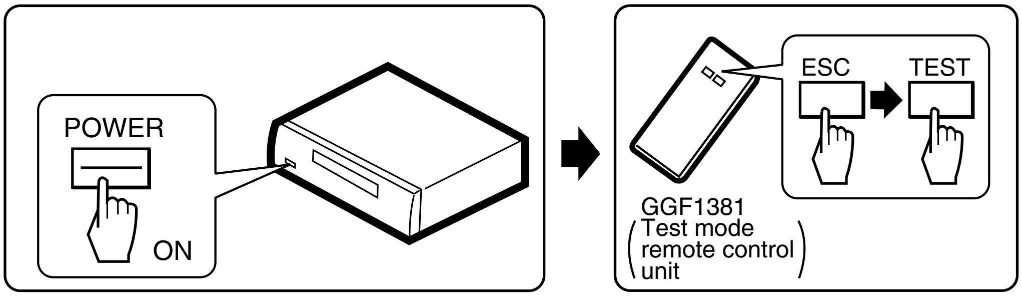
Exchange PCB Assy

When		Adjustment Points
Exchange PC Board LOMB and DVDM ASSY	**Mechanical point**	————
	Electric point	————

6.4 TEST MODE

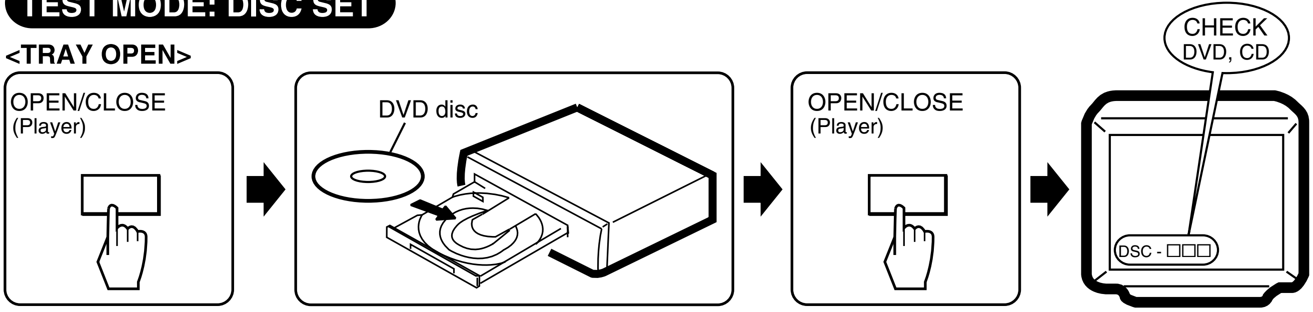
- The TEST MODE functions that are used only during adjustment are described here. For details, see "7.1.1 TEST MODE".

TEST MODE: ON


POWER
ON
ESC
TEST
GGF1381
(Test mode remote control unit)

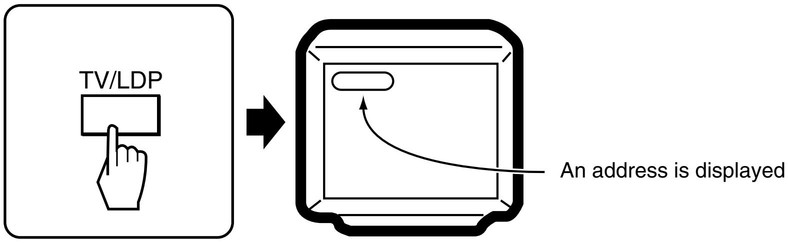
TEST MODE: DISC SET

<TRAY OPEN>


OPEN/CLOSE
(Player)
DVD disc
OPEN/CLOSE
(Player)
CHECK
DVD, CD
DSC - □□□

TEST MODE: PLAY

<PLAY>

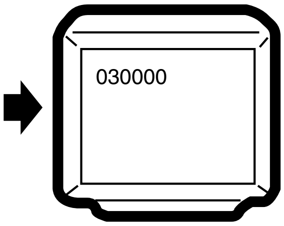

TV/LDP
An address is displayed

CAUTION:
Perform only trace, video and audio outputs are nothing.

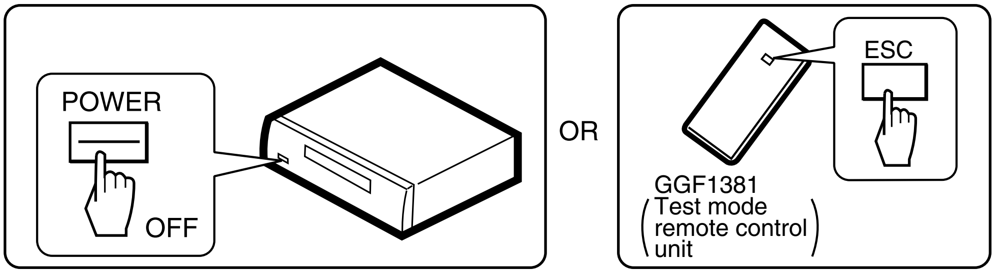
< When playback with the target address of disc (DVD)>

For example, when playback with # 30000

During PLAY +10 ➡ 3 ➡ 0 ➡ 0 ➡ 0 ➡ 0 ➡ CHP/TIM Press keys in order



TEST MODE: OFF

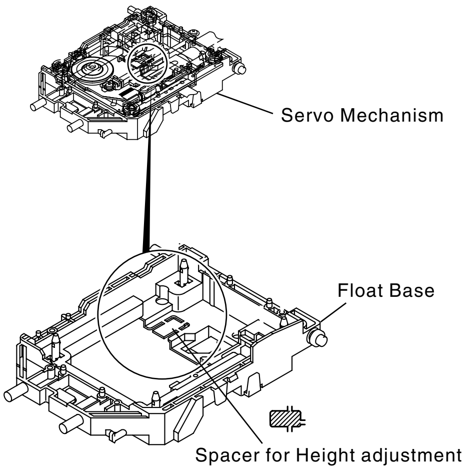

POWER
OFF
OR
ESC
GGF1381
(Test mode remote control unit)

6.5 MECHANISM ADJUSTMENT

① Tangential and Radial Height Coarse Adjustment

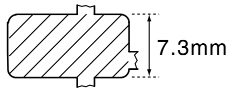
START

- Remove the servo mechanism.
- Remove a Spacer for height adjustment attached to the back side (shaded area) of the Servo Mechanism (Float Base) with nippers.

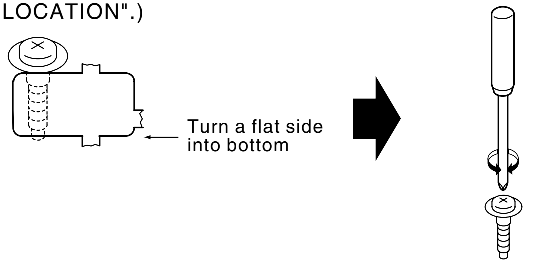

Servo Mechanism
Float Base
Spacer for Height adjustment

Note:
Turn the Short switch to Short side when removing the Pickup Flexible Cable.
(Refer to "7.1.13 DISASSEBLY".)

Cautions:
Because there is not a Spacer for height adjustment in adjustment after the second time, will keep it at need.
(This parts is Traverse mechanism exclusive use of a model for 2003 years)



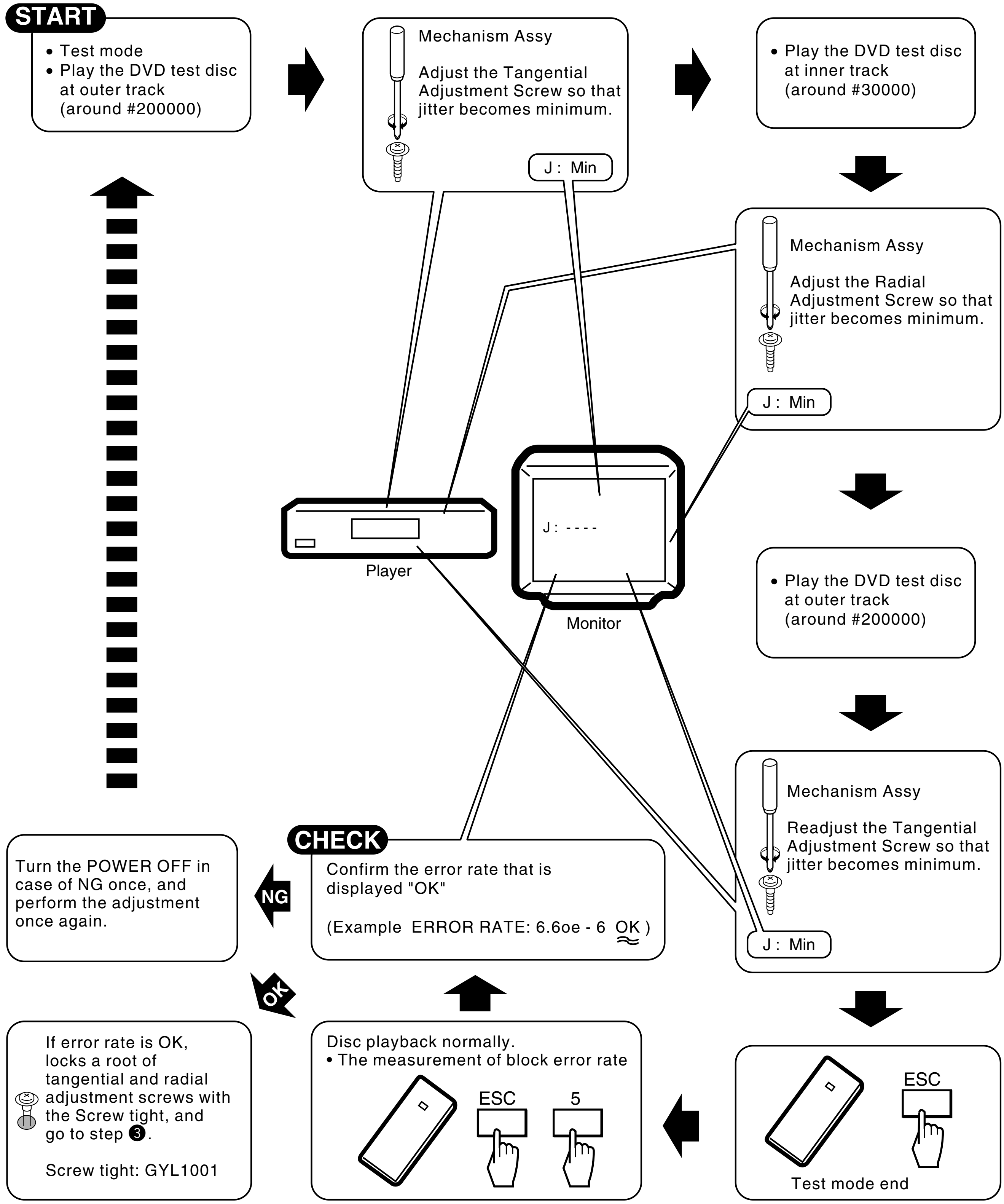
Put a spacer between a Tangential (or Radial) adjustment screw and Mechanism Base and turn each screw to adjust the height. (Refer to "6.1 ADJUSTMENT ITEMS AND LOCATION".)


Turn a flat side into bottom

❷ DVD Jitter Adjustment

- Playback method of inner and outer address for the purpose is refererd to "6.4 TEST MODE".
- Jitter indication of the monitor is refererd to "7.1.2 DISPLAY SPECIFICATION OF THE TEST MODE".

Use disc: GGV1025



START

- Test mode
- Play the DVD test disc at outer track (around #200000)

Mechanism Assy

Adjust the Tangential Adjustment Screw so that jitter becomes minimum.

J : Min

- Play the DVD test disc at inner track (around #30000)

Mechanism Assy

Adjust the Radial Adjustment Screw so that jitter becomes minimum.

J : Min

- Play the DVD test disc at outer track (around #200000)

Mechanism Assy

Readjust the Tangential Adjustment Screw so that jitter becomes minimum.

J : Min

Test mode end

Disc playback normally.
- The measurement of block error rate

CHECK

Confirm the error rate that is displayed "OK"

(Example ERROR RATE: 6.6oe - 6 OK)

Turn the POWER OFF in case of NG once, and perform the adjustment once again.

If error rate is OK, locks a root of tangential and radial adjustment screws with the Screw tight, and go to step ❸.

Screw tight: GYL1001

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TEST MODE

■ Test Mode Functional Specification

① Test mode entry

In the power ON state, press the [ESC] (A8-5F) key and [TEST / RANDOM] (A8-5E) key in order of the Test mode remote control unit.
- Light all FL and LEDs, and turns off the FL and LEDs when pressing any key.
- OSD displays test mode. Refer to "7.1.2 DISPLAY SPECIFICATION OF THE TEST MODE".

② Release the Test mode

- Turn off the power.
- Press the [ESC] (A8-5F) key of the remote control unit and reset it.

③ Tray open / close

- Press the [REPEAT A-B] (A8 - 48) key of the remote control unit.
- Press the [OPEN / CLOSE] key of the main unit during stop state.

④ Playback stop

1. Press the [REPEAT] (A8 - 44) key of remote control unit during playback state.
2. Press the [STOP] key of the remote control unit or main unit during playback state.
   (Playback stops, but the loaded disc keeps rotating.)

⑤ LD ON

DVD : Press the [TEST] (A8-5E) and [1] (A8-01) keys in order, and turn on the laser diode (650n).
CD : Press the [TEST] (A8-5E) and [4] (A8-04) keys in order, and turn on the laser diode (780n).

⑥ Focus on / sweep

1. Lock the focus by pressing the [TEST] (A8-5E) and [2] (A8-02) keys in order.
2. Repeat focus sweep by pressing the [TEST] (A8-5E) and [3] (A8-03) keys in order.

⑦ Spindle FG servo

CAV : Press the [TEST] (A8-5E) and [5] (A8-05) keys in order,then rise up the spindle and FG servo is turned on.
CLV : Press the [TEST] (A8-5E) and [9] (A8-09) keys in order,then rise up the spindle and FG servo is turned on.

⑧ Tracking open / close

1. Open tracking by pressing the [STEP FWD] (A8-54) key of remote control unit during play state.
2. Close tracking by pressing the [STEP REV] (A8-50) key of remote control unit during play state.

⑨ Slider servo on/off

1. Turn on the slider servo by pressing the [TEST] (A8-5E) and [CX] (A8-0E) keys in order.
2. Turn off the slider servo by pressing the [TEST] (A8-5E) and [TV/LDP] (A8-0F) keys in order.

⑩ Slider in / out

Slider in : In tracking off state, press the [SCAN REV] (A8-11) key of the remote control unit.
Slider out : In tracking off state, press the [SCAN FWD] (A8-10) key of the remote control unit.

⑪ Play (perform only ID search and trace to the specified location)

Press the [TV/LDP] (A8-0F) key of the remote control unit during stop state.
Only trace is performed, there are no video and audio outputs.

⑫ Screen display ON/OFF

1. Turn off the display by pressing the [AUDIO] (A8-1E) key of the remote control unit.
2. Turn on the display by pressing the [DISPLAY] (A8-43) key of the remote control unit.

⑬ Search

1. Search address input entry

- It enters to address input mode when pressing the [+10] (A8-1F) key. (Most significant digit of an address displays "<".)
- In this time, last address is displayed as the initial state.

2. Search address input

- Press [0] to [9] (A8-00 to 09) keys of the remote control unit. In the DVD, set an address with hexadecimal.
- In the address input mode, turn to the hexadecimal input by pressing the [PROGRAM] (A8-4C) key (display a "∗" mark), and [1] to [6] keys are each input as A to F.
- Hexadecimal input and decimal input can switch with toggle.
- In case of CD, only the absolute time search is performed.

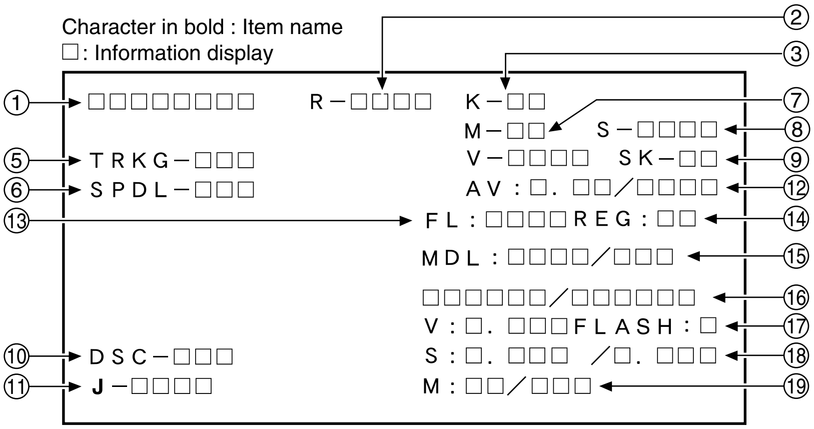
3. Search execution

- Press the [CHP/TM] (A8-13) key of the remote control unit.
- After the search, only trace is performed, there are no video and audio outputs.

4. Release the Search address input

- Clear the address by pressing the [CLEAR] (A8-45) key. Release from address input mode by pressing the [CLEAR] key once again.

7.1.2 DISPLAY SPECIFICATION OF THE TEST MODE



① **Address indication**
The address being traced is displayed in number.
(as for the DVD, indication of decimal number is possible.)
DVD : ID indication (hexadecimal number, 8 digits)
[∗∗∗∗∗∗∗∗]
CD : A-TIME (min. sec.) [0 0 0 0 ∗∗∗∗]

② **Code indication of remote control unit [R – ∗∗∗∗]**
In case of double code, display a 2nd code.

③ **Main unit keycode indication [K – ∗∗]**

⑤ **Tracking status [TRKG – ∗∗∗]**
Tracking on : [ON]
Tracking off : [OFF]

⑥ **Spindle status [SPDL – ∗∗∗]**
[OFF], [ACC/BRK], [CAV], [CLV]

⑦ **Mechanism (loading) position value [M – ∗∗]**

Unknown	: [01] or [41]
Open state	: [04]
Close state	: [08]
During opening	: [12]
During closing	: [22]

⑧ **Slider position [S – ∗∗∗∗]**

In Side Switch ON	: [01]
In Side Switch OFF	: [00]

⑨ **Output video system [V – ∗∗∗∗]**

NTSC system	: [NTSC]
PAL system	: [PAL]
Automatic setting	: [AUTO]

Scart terminal output [SK – ∗∗]
(Display only the WY model which can do the output setting of scart terminal.)

VIDEO	: [00]
S-VIDEO	: [01]
RGB	: [02]

⑩ **Disc sensing [DSC – ∗∗∗]**
The type of discs loaded is displayed.
[DVD], [CD], [VCD], [ ]

⑪ **Jitter value [J – ∗∗∗∗]**

⑫ **Version of the AV-1 chip / version of firmware [AV: ∗∗ / ∗∗∗∗∗∗∗∗]**

⑬ **Version of the FL controller [FL: ∗∗∗∗]**

⑭ **Region setting of the player [REG: ∗]**
Setting value : [1] to [6]

⑮ **Destination setting of the FL controller [MDL: ∗∗∗∗ / ∗∗∗]**
Four characters in the front represent the type of model.
Three characters in the back represent the destination code.
J: /J, K: /KU, /KC, /KU/KC, R: /RL/RD, RAM : /RAM,
LB: /LB, WY: /WY

⑯ **Part number of the flash ROM and system controller [∗∗∗∗∗∗ / ∗∗∗∗∗∗]**

⑰ **Version of the flash ROM [V: ∗. ∗∗∗]**
Flash ROM size [FLASH = ∗∗]

⑱ **Revision of the system controller [S: ∗. ∗∗∗ / ∗. ∗∗∗]**
version . revision / build number of the ST core

⑲ **Revision of the DVD mechanism controller [M: ∗∗ / ∗∗∗]**
Kinds of version / firmware of the FE.
RAM or ROM

7.1.3 FUNCTIONAL SPECIFICAION OF THE SHORTCUT KEY

Only during normal playback, the following shortcut keys can be assigned by pressing a required key after pressing the ESC key of the remote control unit. To quit, press the ESC key

Command Contents	Conditions	Remote Control Key Name	Remote Control Code
Memory clear and resion / revision indication		CLEAR (∗1)	A8-45
Average value measurement of DVD error rate		5 (∗1)	A8-05
CD error rate measurement		5 (∗1)	A8-05
Aspect : Pan scan		2	AF-A2
Aspect : Letter box		3	AF-A3
Aspect : Wide		4	AF-A4
Digital : AC3		5	AF-A5
Digital : AC-3 > PCM		6	AF-A6
Virtual surround : OFF	Only for models having the corresponding functions	7	AF-A7
Virtual surround : TruSurround		8	AF-A8
Digital output ON		REPEAT A	AF-E8
Digital output OFF		REPEAT B	AF-E4
DTS Digital output ON		STEP FWD	AF-B7
DTS Digtal output OFF		STEP REV	AF-B8
Scart terminal output : VIDEO	WY, models equipped with Scart terminal	AUDIO	AF-BE
Scart terminal output : S-VIDEO		SUBTITLE	AF-36
Scart terminal output : RGB		ANGLE	AF-B5
Progressive OFF	Only for progressive models	R_SKIP	A3-9D
Progressive ON		F_SKIP	A3-9C
Audio 5.1 CH ON	Only for models having the corresponding functions	KD_ENTER	AF-EF
FL indication of EDC / ID error		CX (∗1)	A8-0E
FL indication of ID number		STEREO (∗1)	A8-4A
ZOOM ON (X4)		ZOOM	AF-37
ZOOM OFF		< X3 (∗1)	A8-59
Service mode indication (error rate indication, etc.)		CHP/TIM (∗1)	A8-13
Model information indication		CHAP (∗1)	A8-40
Background color change		+10 (∗1)	A8-1F
Audio last stage mute ON		9	AF-A9
Audio last stage mute OFF		0	AF-A0
Title search Input mode IN Title No. input Search execution		SIDE A (∗1) Numbers (∗1) PLAY (∗1)	A8-4D A8-00 to A8-09 A8-17
Region confimation mode		AUDIO (∗1) Numbers (∗1)	A8-1E A8-01 to A8-08

∗1 : Test mode remote control unit

• Service mode indication (ESC + CHP/TIM keys)

ID Address
The error rate is always displayed in exponential notation, e.g., ∗.∗ ∗ e - ∗, for both DVDs and CDs.
EDC/ID/AV 1 error history (ID Address, EDC/ID/AV 1 Error, last eight errors)
Self-diagnosis functions (If a mechanical error has occurred, the mechanical-error history is also displayed.)

• Calculation of the average error rate (ESC + "5" [Test mode remote control unit] keys)

The average of the last eight error rates is calculated and indicated in exponential notation. After the calculation is completed, "OK" or "NG" is displayed. If "NG" is displayed, the disc tray will open (for both DVDs and CDs)
For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less

• Indication of model information (ESC + CHAP keys)

The items from 12 to 19 of the TEST MODE Indications are displayed. However, in the indications, S in the standard test mode is changed to B.E VERSION, and M is changed to F.E VERSION. For details, see 7.1.4.

• Change of the background colors (ESC + "+10" [Test mode remote control unit] keys)

Every time the keys are pressed, the background color is changed between blue and green alternately.
(The green background is used in SETUP NAVIGATOR.)

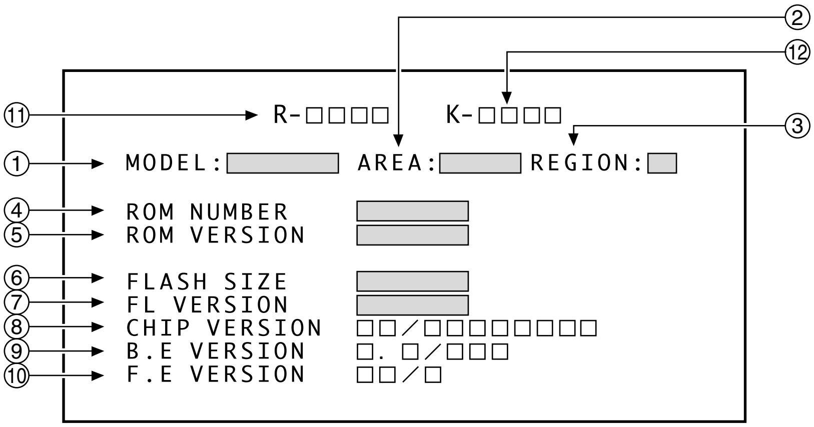
• Region confirmation mode (ESC + AUDIO [Test mode remote control unit] + "1"-"8" [Test mode remote control unit] keys)

After you press the AUDIO key while holding the ESC key pressed and then input the region number, if the number is different from that set in the unit, an error message is displayed, and the tray opens.

7.1.4 SPECIFICAION OF MODEL INFORMATION DISPLAY

To display model information : Press the ESC key then the CHAP key.
To close the model information display : Press the ESC key.

- **Display contents**


②
⑫
⑪
R-□□□□
K-□□□□
③
①
MODEL:
AREA:
REGION:
④
ROM NUMBER
⑤
ROM VERSION
⑥
FLASH SIZE
⑦
FL VERSION
⑧
CHIP VERSION
□□/□□□□□□□□
⑨
B.E VERSION
□. □/□□□
⑩
F.E VERSION
□□/□

Character in bold : Item name
□: Information display

① **Model name**
Display it according to model information set from the FL controller.
② **Destination indication**
Display it according to model information set from the FL controller.
③ **Region No.**
④ **Part number**
⑤ **ROM version**
⑥ **Flash size**
⑦ **FL controller version**

⑧ **CHIP VERSION**
Version of ST CHIP
CUT ID / JTAG ID
↑ ↑
(two columns) (eight columns)
⑨ **B.E VERSION**
Version of BACK END (version of ST core software)
□.□ /□□□
softwareVersion . softwareRevision / buildNumber
⑩ **F.E VERSION**
Version of FRONT END (version of mechanism controller CHIP software)
□□/□
MainVersion / Kinds of firmware RAM or ROM
⑪ **Remote control code**
⑫ **Key code of Main unit**

7.1.5 FUNCTIONAL SPECIFICAION OF THE SERVICE MODE

• EDC / ID error FL display (shortcut function)

EDC/ID error is displayed on the FL display if you press the CX key while holding the ESC key on the TEST MODE remote control unit pressed. To quit while an EDC/ID error is displayed, press the ESC key.

FL display
00 /00 / 01 ∗

∗: Lights when an AV1 error was generated at least once.
Number of sites where an EDC or ID error was generated
Number of retrials while an ID error is being generated (only displayed at the moment when an error is being generated), and for the ST models, the number of retrials made for the latest ID error
Number of retrials while an EDC error is being generated (only displayed at the moment when an error is being generated), and the number of retrials made for the latest EDC error

• Display during Service Mode

To enter Service Mode, press the CHP/TIM key while holding the ESC key pressed.
To quit, press the ESC key.

Service mode display

① ID Address
② Error rate (always displayed), in exponential notation

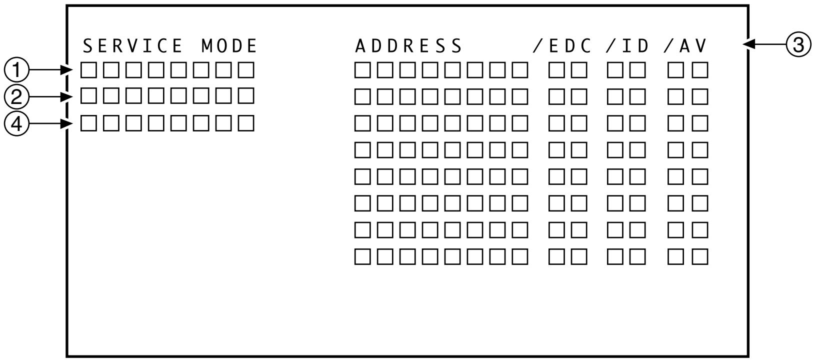
∗∗ (∗∗∗∗)

Number of error rates
02: Indicates use of the same method as for the 02 models,
No indication: Indicates use of the method used for models before the 02 model

③ EDC/ID/AV1 error history (ID Address, EDC/ID/AV1 errors, last eight errors)
Description of AV1 errors
BIT0: In BE code, an EDC error, FEC I/F buffer overflow, or "not valid" is generated (B.E error)
BIT1: In BE code, the ID is different from that of the target (B.E error)
BIT2: An error was generated in FE-added 2-byte EDC data. (F.E error)

④ Self-diagnosis functions
Whether F.E is normal or not is checked.
FE OK: No abnormality in F.E
FE Error: Abnormality is recognized in F.E.
Pressing the CHP/TIM key again displays the mechanical error history. Each press of the CHP/TIM key changes the displays between the mechanical error history and the Service Mode display.
For details on the mechanical error history, refer to the addendum.

Indication plan contents



AV1 ERR	BIT 2	BIT 1	BIT 0
00	0	0	0
01	0	0	1
02	0	1	0
03	0	1	1
04	1	0	0
05	1	0	1
06	1	1	0
07	1	1	1

Character in bold : Item name
☐: Information display

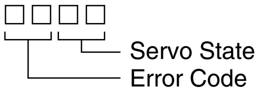
7.1.6 MECHANICAL ERROR HISTORY

■ Mechanical Error History

Only if a mechanical error (FE error) has been generated, a mechanical error history containing up to the last eight errors is displayed if you press the CHP/TIM key in Service Mode.
Errors are displayed in descending order, with the latest one at the top.

Description of the mechanical error history

① Error number
The first two digits are for the error code, and the second two digits are for the servo state.

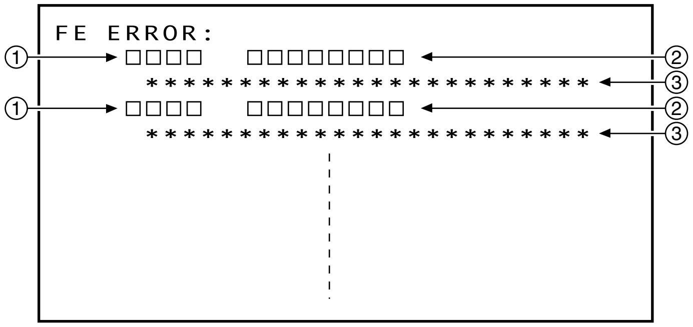


② Error number
The elapsed time from the time when the system was turned on until an error was generated is displayed.
Note: If a later error time is shorter than the previous error time, it means that the unit was turned off then on again.

③ Description of errors
Error messages are displayed.
Example: If the error code is 0x13 (Focus lost timeout) and the servo state is 0x05 (Disc judge), the message becomes "Focus lost timeout in Disc judge."

Note: When an error has been generated, if the servo state is "Disc judge," the disc tray opens, and if the servo state is other than "Disc judge," the unit stops (excluding a case of a device error with the error code 0xd*).

Indication contents



• List of the error codes

FOCUS ERROR	0x0*	**FOCUS TIMEOUT**	0x1*
Focus on error	0x01	Focus on timeout	0x11
Focus off error	0x02	Focus off timeout	0x12
Focus lost error	0x03	Focus lost timeout	0x13
Focus balance adjust error	0x04	Focus balance adjust timeout	0x14
Focus gain adjust error	0x05	Focus gain adjust timeout	0x15
Focus sweep error	0x06	Focus sweep timeout	0x16
Focus reflection error	0x07	Focus reflection timeout	0x17
TRACKING ERROR	0x2*	**TRACKING TIMEOUT**	0x3*
Tracking on error	0x21	Tracking on timeout	0x31
Tracking off error	0x22	Tracking off timeout	0x32
Tracking lost error	0x23	Tracking lost timeout	0x33
Tracking balance adjust error	0x24	Tracking balance adjust timeout	0x34
Tracking gain adjust error	0x25	Tracking gain adjust timeout	0x35
STEPPING ERROR	0x4*	**STEPPING TIMEOUT**	0x5*
Stepping on error	0x41	Stepping on timeout	0x51
Stepping off error	0x42	Stepping off timeout	0x52
Stepping lost error	0x43	Stepping lost timeout	0x53
Stepping move error	0x44	Stepping move timeout	0x54
SPINDLE ERROR	0x6*	**SPINDLE TIMEOUT**	0x7*
Spindle on error	0x61	Spindle on timeout	0x71
Spindle off error	0x62	Spindle off timeout	0x72
Spindle lost error	0x63	Spindle lost timeout	0x73
Spindle CAV error	0x64	Spindle CAV timeout	0x74
Spindle CLV error	0x65	Spindle CLV timeout	0x75
ACQUISITION ERROR	0x8*	**ACQUISITION TIMEOUT**	0x9*
PLL lost error	0x83	PLL lost timeout	0x93
DECODER ERROR	0xa*	**DECODER TIMEOUT**	0xb*
ID lost error	0xa3	ID lost timeout	0xb3
DEVICE ERROR	0xd*		
SRAM error	0xd1		

• List of the servo states

0x00	Reset
0x01	Stop (inside position)
0x02	Stop (any position)
0x03	Braking for stop
0x04	New disc
0x05	Disc judge
0x06	Reserved 1
0x07	Playing
0x08	Start up
0x09	Seeking
0x0A	Pausing
0x0B	Reading BCA
0x0C	Reserved 2
0x0D	
0x0E	Tray open
0x0F	Tray moving

Note : 0 x □□
code
(Only this part is displayed to a display)

Error Code Table

Error Name	No.	Causes	Check Item	Possibility of Trouble	Remarks
FOCUS ERROR (0 x 0*)					
Focus on error	0 x 01	Focus on could not be completed	Are not there a dirt or a scratch in the Disc? Does LD become weak? Does the lens move up and down?	1. Pickup 2. Driver 3. Front End IC	
Focus off error	0 x 02	Focus off could not be completed	Unknown		
Focus lost error	0 x 03	Focus servo is lost	Are not there a dirt or a scratch in the Disc? Does LD become weak?	1. Pickup	
Focus balance adjust error	0 x 04	AFB on could not be completed			
Focus gain adjust error	0 x 05	Focus AGC could not be completed			
Focus sweep error	0 x 06				
Focus reflection error	0 x 07	Dimensions of S curve did not reach to the aim value	Does LD become weak?	1. Pickup	
FOCUS TIMEOUT (0 x 1*)					
Focus on timeout	0 x 11	Did timeout at focus on	Are not there a dirt or a scratch in the Disc? Does LD become weak? Does the lens move up and down?	1. Pickup 2. Driver 3. Front End IC	
Focus off timeout	0 x 12	Did timeout at focus off			
Focus lost timeout	0 x 13	Did timeout at focus backup			
Focus balance adjust timeout	0 x 14	Did timeout at AFB			
Focus gain adjust timeout	0 x 15	Did timeout at AGC			
Focus sweep timeout	0 x 16				
TRACKING ERROR (0 x 2*)					
Tracking on error	0 x 21	Tracking on could not be completed		1. Pickup 2. Driver 3. Front End IC	
Tracking off error	0 x 22	Tracking off could not be completed			
Tracking lost error	0 x 23	Tracking servo is lost		1. Pickup	
Tracking balance adjust error	0 x 24	ATB could not be completed		1. Pickup	
Tracking gain adjust error	0 x 25	AGC could not be completed		1. Pickup	
Tracking jump error	0 x 26	Tracking jump could not be completed			
TRACKING TIMEOUT (0 x 3*)					
Tracking on timeout	0 x 31	Did timeout at tracking on	Are not there a dirt or a scratch in the Disc?	1. Pickup 2. Driver 3. Front End IC	
Tracking off timeout	0 x 32	Did timeout at tracking off			
Tracking lost timeout	0 x 33	Did timeout at tracking backup	Are not there a dirt or a scratch in the Disc?	1. Pickup	
Tracking balance adjust timeout	0 x 34	Did timeout at ATB		1. Pickup	
Tracking gain adjust timeout	0 x 35	Did timeout at AGC		1. Pickup	
Tracking jump timeout	0 x 36	Did timeout at tracking jump			
STEPPING ERROR (0 x 4*)					
Stepping on error	0 x 41	Stepping on could not be completed		1. Pickup 2. Driver 3. Front End IC	
Stepping off error	0 x 42	Stepping off could not be completed			
Stepping lost error	0 x 43	Stepping servo is lost			
Stepping move error	0 x 44	Stepping could not move	Do move to inner and outer periphery of the stepping in the test mode? Do indicate "S-04" at the most inner periphery of the stepping?	1. Stepping motor 2. Inside switch 3. Driver	
STEPPING TIMEOUT (0 x 5*)					
Stepping on timeout	0 x 51	Did timeout at stepping on		1. Pickup 2. Driver 3. Front End IC	
Stepping off timeout	0 x 52	Did timeout at stepping off			
Stepping lost timeout	0 x 53	Did timeout at stepping backup			
Stepping move timeout	0 x 54	Did timeout at stepping movement	Do move to inner and outer periphery of the stepping in the test mode? Do indicate "S-04" at the most inner periphery of the stepping?	1. Stepping motor 2. Inside switch 3. Driver	

Error Name	No.	Causes	Check Item	Possibility of Trouble	Remarks
SPINDLE ERROR (0 x 6*)					
Spindle on error	0 x 61	Spindle on could not be completed			
Spindle off error	0 x 62	Spindle off could not be completed			
Spindle lost error	0 x 63	Spindle lost control			
Spindle CAV error	0 x 64	CAV on could not be completed			
Spindle CLV error	0 x 65	CLV on could not be completed			
SPINDLE TIMEOUT (0 x 7*)					
Spindle on timeout	0 x 71	Did timeout at spindle on			
Spindle off timeout	0 x 72	Did timeout at spindle stop			
Spindle lost timeout	0 x 73	Did timeout at spindle backup	Are not there a dirt or a scratch in the Disc? Is FG output from the driver?	1. Spindle motor 2. Spindle driver	
Spindle CAV timeout	0 x 74	Did timeout at CAV on	Is spindle rotating? Is FG output from the driver? Is the PDM output from Front End?	1. Spindle motor 2. Spindle driver 3. Front End IC	
Spindle CLV timeout	0 x 75	Did timeout at CLV on			
ACQUISITION ERROR (0 x 8*)					
PLL lost error	0 x 83	PLL is lost	Are not there a dirt or a scratch in the Disc?	1. Pickup 2. Front End IC	
ACQUISITION TIMEOUT (0 x 9*)					
PLL lost timeout	0 x 93	Did timeout at PLL backup	Are not there a dirt or a scratch in the Disc?	1. Pickup 2. Front End IC	
DECODER ERROR (0 x a*)					
ID lost error	0 x a3	ID is not readable	Are not there a dirt or a scratch in the Disc?	1. Pickup 2. Front End IC	
DECODER TIMEOUT (0 x b*)					
ID lost timeout	0xb3	Did timeout at ID backup	Are not there a dirt or a scratch in the Disc?	1. Pickup 2. Front End IC	
DEVICE ERROR (0 x d*)					
SRAM error	0 x d1	Cannot access SRAM	Power supply of SRAM Is not bus line short-circuiting?	1. SRAM 2. Front End IC 3. Front End-SRAM bus line	
FAILSAFE (0 x e*)					
Unexpected error	0 x e1	Unexpected error		1. software runaway 3. Software bug	

Protection Specifications and Service Mode

• Protection Specifications

The system microcomputer (AF Assy IC5501) for this unit always monitors if abnormality of the power is generated, and as soon as an abnormality is detected shuts off the power. The specifications of the microcomputer terminal for monitoring are as follows:

Name of microcomputer terminal		XPROTECT (Pin 22)	VDET (Pin 17)
Monitoring item		Abnormality of AMP-system power Short-circuiting of the SP terminal, etc.	Abnormality of power inside the DVDM Assy
Voltage at terminal	In normal conditions	0.71 Vdd∗ or more	0.5 Vdd-0.85 Vdd∗
	In abnormal conditions	0.36 Vdd-0.71 Vdd∗	
	In failure	0.36 Vdd∗ or less	0.85 Vdd∗ or more 0.5 Vdd∗ or less
Monitoring start time		1.5 sec after power is turned on	Detection starts 0.5 sec after DVD module is turned on.
Time required for determining abnormality		0.5 sec after detection	0.5 sec after detection

∗Vdd = Approx. 5 V (depending on the unit)

In abnormal conditions or in failure, the TIMER LED flashes after the power is shut off. If the power was shut off because of an abnormality, it can be turned on by pressing the STANDBY/ON key. However, if the power was shut off because of failure, for one minute after a shutdown the STANDBY/ON key is disabled in order to protect against possible ignition of fumes. If the AC power cord is pulled out during this one minute of standby, when the AC power cord is reconnected, the STANDBY/ON key will still be disabled until the remaining seconds have elapsed.

This unit has Service Test mode for analyzing the above power abnormality. Its specifications are as follows:

1. Specific conditions for Service Test mode

- VDET is neglected.
- XPROTECT is neglected.
- Even if the unit is urgently shut down in failure in Normal mode, you can turn it on without waiting for one minute.

2. How to enter Service Test mode

- While holding the "DISC 1 key" and "STOP key" pressed, connect AC power cord.

3. How to quit Service Test mode, and the conditions for quitting

- To quit Service Test mode, turn the power off or disconnect the AC power cord.
- When quitting Service Test mode, only RAM data related to protection are cleared.

4. Indications when Service Test mode starts

- Indications on the FL display when Service Test mode starts differ depending on whether the unit was turned off normally or if the unit was urgently shut down because of the abnormality of the power, as described below.

[After the power is turned off normally]

FL display Welcome!
⇩
FL display Volume 0
⇩
FL display DV SERVICE

[After the power is shut down because of a failure in the AMP system]

FL display PRTCT ERR
⇩
FL display Volume 0
⇩
FL display DV SERVICE

[After the power is shut down because of an abnormality in the AMP system]

FL display PRTCT WNG
⇩
FL display Volume 0
⇩
FL display DV SERVICE

[After the power is shut down because of a failure in the DVD system]

FL display DVD PRTECT
⇩
FL display Volume 0
⇩
FL display DV SERVICE

5. Operations during Service Test mode

- Basically, operations in Service Test mode are the same as in Normal mode. However, to clarify that it is in Service Test mode, during this mode, when functions are changed, the indications on the FL display become as follows:

[Functions]	[Indications on the FL display]	[Functions]	[Indications on the FL display]
DVD/CD	DV SERVICE	LINE2	L2 SERVICE
TUNER	TX SERVICE	TV	TV SERVICE
LINE1	L1 SERVICE		

6. Operations during DSP module error diagnosis function

[How to enter DSP module error diagnosis]

- Press "DISPLAY" button of the accessory remote control(*) in service test mode to show DSP error messages.

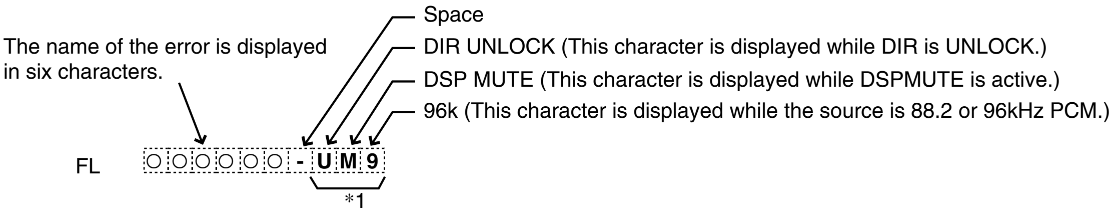
[How to quit DSP module error diagnosis]

- Press "DISPLAY" button of the accessory remote control(*) again to select normal service test mode.

For this reason, the usual function of "display" is not effective during Service Test mode.
- DVD total running time/remaining time display is inactive.
- OSD changing on TV is also inactive.

(*) : The alternative control is "DISPLAY" button of the accessory remote control of Pioneer Home Theater System or "SYSTEM DISPLAY" button of Pioneer mini Component System.

■ Specification of DSP error display


Space
DIR UNLOCK (This character is displayed while DIR is UNLOCK.)
DSP MUTE (This character is displayed while DSPMUTE is active.)
96k (This character is displayed while the source is 88.2 or 96kHz PCM.)
The name of the error is displayed in six characters.
FL
○○○○○○-UM9
*1

*1 : The "U", "M" and "9" are not displayed synchronizing with the display "ERR_0" - "ERR_4" ("DIRERR",etc), but it depends on the state each time.
The following example display of "ERR_0" - "ERR_4" is just a sample.

[Error]	[Indications on the FL display]
ERR_0	`DIRERR-UM `
ERR_1	`DSPERR-UM `
ERR_2	`HREQ  -UM `
ERR_3	`DSP NG-UM `
ERR_4	`DMUTE - M `
NO ERR	`DSP OK-   `

Refer to "7.1.9 DSP TROUBLE SHOOTING".

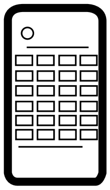
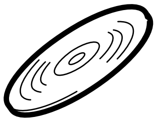
7.1.7 ID NUMBER AND ID DATA SETTING

Caution:
For the DVD players compatible with DVD-RW, for playback of a DVD-RW disc (CPRM), it is necessary that an individual ID number and ID data are set for each player. If the ID number and ID data be not properly set in the manner described below, future operations cannot be guaranteed. The ID number is written on the yellow label at the rear panel of the player.
If there is no yellow label, before downloading FLASH ROM, take note of the ID number set following the procedures outlined in "ID Number Confirmation Mode" on the next page.

Note: Enter ID numbers while the unit is in Stop mode so that the values set will be immediately written to the flash ROM.

Setting an ID number or ID data is required in the following case:
If "No ID Number!" or "NO ID DATA!" is displayed on the TV screen and on the FL display for a few seconds immediately after the power to the player is turned on or during Stop mode.

JIGS AND MEASURING INSTRUMENTS

 Service Remote Control Unit (GGF1381)	 DVD Data Disc (GGV1133) (GGV1174) (*) Refer to P138.

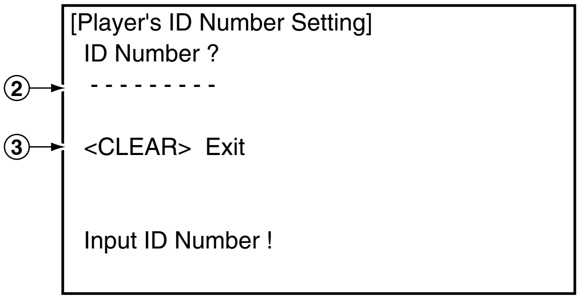
■ ID Number Input Mode

① To enter ID Number Input Mode, with no ID number set, such as in a case of immediately after upgrading the firmware, press the ESC key then the STEREO key.

Note: If a previous ID number and ID data, such as a factory-preset ID number and ID data, are maintained, the unit enters ID Number Confirmation Mode when the above keys are pressed. However, if only an ID number is maintained, the unit enters ID Data Input Mode.

② Enter a 9-digit ID number. The ID number is also displayed on the FL display.

③ By pressing the CLEAR key without having input a number, you can exit this mode. Each press of this key after a number has been input deletes one digit.

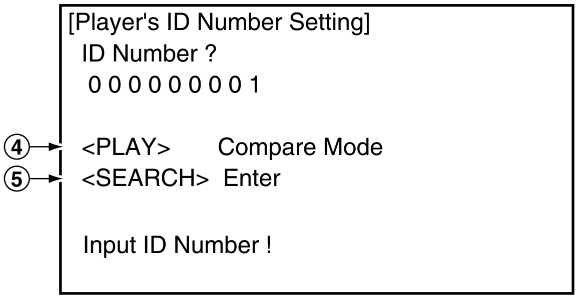


```
[Player's ID Number Setting]
  ID Number ?
   - - - - - - - - -

  <CLEAR>  Exit


  Input ID Number !
```

④ After entering all 9 digits, if you press the PLAY key, the unit enters Compare mode. Enter the same ID number again. Only if your two input numbers match, the ID number is set. Compare mode helps eliminate mistyping of the ID number.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ② without doing anything else.

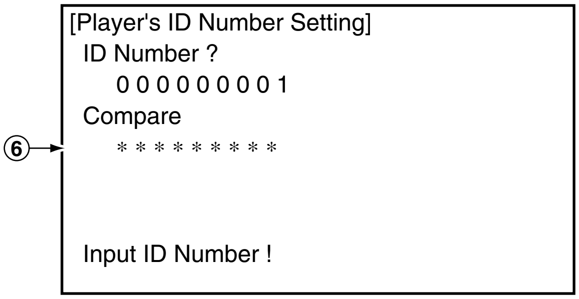
⑤ After entering all 9 digits, if you press the SEARCH key, the unit unconditionally sets the input number as the ID number. Then the unit automatically enters Player's Data Input Mode. (The SEARCH key is not accepted after all 9 digits have been entered.)



```
[Player's ID Number Setting]
  ID Number ?
   0 0 0 0 0 0 0 0 1

  <PLAY>      Compare Mode
  <SEARCH>  Enter


  Input ID Number !
```

⑥ This display appears when the PLAY key is pressed in Step 4. Enter a 9-digit number to compare. The number is also displayed on the FL display.

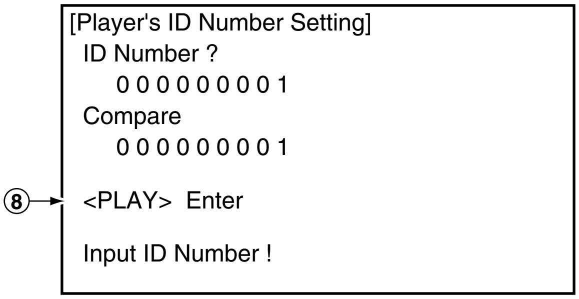
⑦ By pressing the CLEAR key without having input a number, the unit returns to Step ② without doing anything else. Each press of this key after a number has been input deletes one digit.



```
[Player's ID Number Setting]
  ID Number ?
     0 0 0 0 0 0 0 0 1
  Compare
     * * * * * * * * *



  Input ID Number !
```

⑧ After entering all 9 digits, if you press the PLAY key, the unit compares the numbers input in Steps ② and ⑥, and only if the numbers match, that number is set as the ID. Then the unit automatically enters ID DATA Input Mode. If the numbers do not match, the disc tray is opened, and the unit exits ID Number Input Mode.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ⑥ without doing anything else.



```
[Player's ID Number Setting]
  ID Number ?
     0 0 0 0 0 0 0 0 1
  Compare
     0 0 0 0 0 0 0 0 1

  <PLAY>  Enter

  Input ID Number !
```

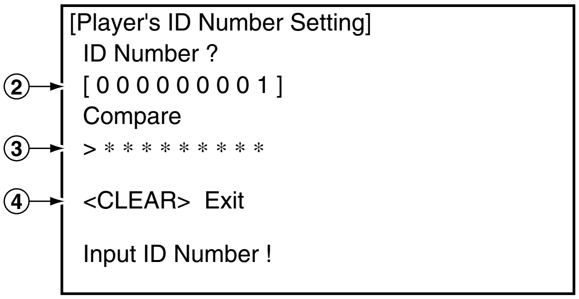
ID Number Confirmation Mode

① To enter ID Number Confirmation Mode after the ID number and the ID data are set, press the ESC key then the STEREO key.

② The ID number already set is displayed. (It is also displayed on the FL display.)

③ Enter a 9-digit number for comparison. This is not required when you only wish to check the ID number. (The number is also displayed on the FL display.)

④ By pressing the CLEAR key without having input a number, you can exit this mode. Each press of this key after a number has been input deletes one digit.

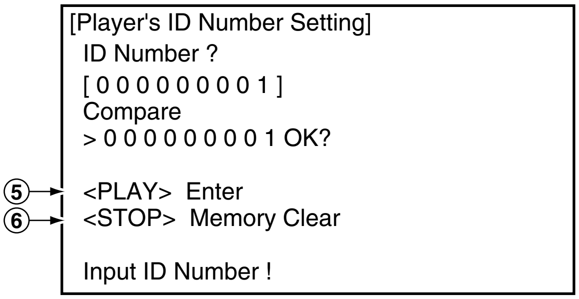


```
[Player's ID Number Setting]
  ID Number ?
  [ 0 0 0 0 0 0 0 0 1 ]
  Compare
  > * * * * * * * * *

  <CLEAR>  Exit

  Input ID Number !
```

⑤ After entering all 9 digits, if you press the PLAY key, the unit compares the number entered in Step ② with the ID number set, and only if the numbers match, the unit automatically exits ID Number Confirmation Mode. If an ID data has not been entered, the unit enters ID DATA Input Mode. If the numbers do not match, the disc tray opens, and the unit exits ID Number Confirmation Mode.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ④ without doing anything else.

⑥ After entering all 9 digits, if you press the STOP key, the unit compares the number entered in Step ③ with the ID number set, and only if the numbers match, the unit automatically deletes the ID number and exits this mode. If the numbers do not match, the disc tray opens, and the unit exits this mode. (The STOP key is not accepted after all 9 digits have been entered.)



```
[Player's ID Number Setting]
  ID Number ?
  [ 0 0 0 0 0 0 0 0 1 ]
  Compare
  > 0 0 0 0 0 0 0 0 1 OK?

  <PLAY>  Enter
  <STOP>  Memory Clear

  Input ID Number !
```

• Indication of an ID number already set

An ID number already set is displayed in the following cases:

1) When the ESC key then the CLEAR key are pressed, user settings are cleared, then the ID number set is displayed on the screen. In this case, the ID number is not displayed on the FL display.
2) When the unit enters ID Number Confirmation Mode by pressing the ESC key then the CLEAR key, the ID number set is displayed. In this case, the ID number is also displayed on the FL display.
   If you only need to confirm the ID number, you can exit this mode by pressing the CLEAR key or turning off the power.

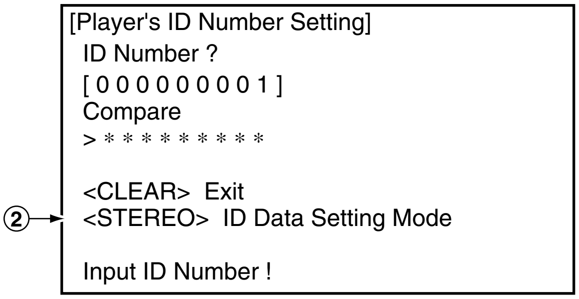
• Indication when no ID number is set

If no ID number is set, the message "No ID Number!" flashes on the screen and FL display for a few seconds after the power is turned on or during Stop mode.

ID DATA Input Mode

① To enter ID DATA Input Mode, with the ID number set, press the ESC key then the STEREO key.

② When the STEREO key is pressed, the unit enters ID DATA Input Mode.



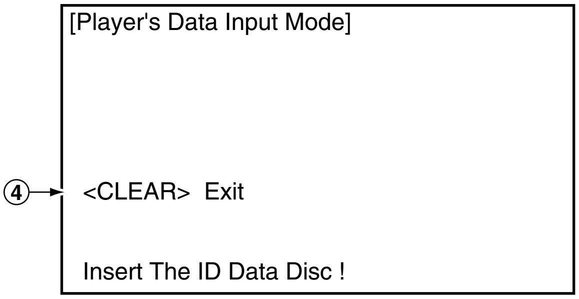
[Player's ID Number Setting]
ID Number ?
[0 0 0 0 0 0 0 0 0 1]
Compare
> * * * * * * * * *

<CLEAR> Exit
② <STEREO> ID Data Setting Mode

Input ID Number !

③ If the DVD DATA DISC is loaded in this mode, the unit automatically starts reading the data.
(If the DVD DATA DISC has already been loaded, the unit does not start reading the data. In this case, open the tray then close.)

④ To exit this mode, press the CLEAR key. While data are being read from the DVD DATA DISC, you cannot exit this mode.



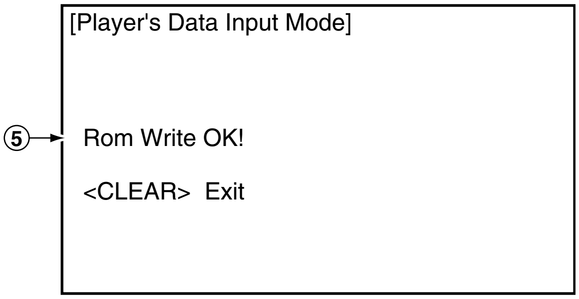
[Player's Data Input Mode]

④ <CLEAR> Exit

Insert The ID Data Disc !

⑤ When writing of the data read from the disc to flash ROM is completed, "Rom Write OK!" is displayed. After seeing this message, you can exit this mode by pressing the CLEAR key.

Note: Whether or not the data have been written to flash ROM can be confirmed by the message "Rom Write OK!" being displayed after the disc is read.

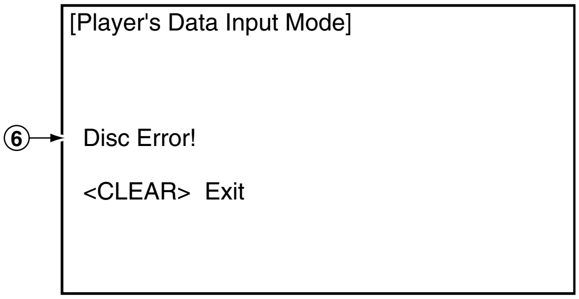


[Player's Data Input Mode]

⑤ Rom Write OK!

<CLEAR> Exit

⑥ If the data cannot be read from the disc, "Disc Error!" is displayed on the screen, and the disc is ejected.



[Player's Data Input Mode]

⑥ Disc Error!

<CLEAR> Exit

• Indication when the data have not been set

If no ID data are set after the ID number is changed, the message "NO ID DATA" flashes on the screen and FL display for a few seconds after the power is turned on or during Stop mode.

7.1.8 TROUBLE SHOOTING

■ Microcomputer Section (AF Assy : IC5501)

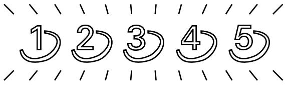
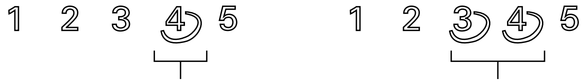
Symptom	Possible Cause	Check Method
• The unit cannot be turned on.	The microcomputer was not reset.	Check if the level of the terminal XRESET (Pin 8) is "H." If it is not, check the RESET circuit.
	The AC pulse is not input.	Check if the AC pulse is input to Pin 4 of the AC input terminal. If it is not, check the AC pulse generation circuit.
	The oscillation circuit of the microcomputer does not function.	The microcomputer or the oscillation circuit is broken. Change the microcomputer or the oscillation circuit.
The unit shuts itself off soon after it is turned on.	• If the Function is DVD, the voltage of the VDET input (Pin 17) is either 0.5 Vdd or less or 0.85 Vdd or more. • The voltage of the PROTECT input (Pin 22) is 0.71 Vdd or less.	If the voltage at Pin 17 of the VDET terminal of the microcomputer is either 0.5 Vdd or less or 0.85 Vdd or more, adjust so that it stays between 0.5 and 0.85 Vdd.
• DVD does not operate at all. • Time is not displayed in FL display during DVD function.	Communication with the DVD microcomputer has not been established.	• Check that the terminal (Pins 23-25, 29, and 30) for communication with the DVD microcomputer is live, and if it is not, check if the flexible cable is disconnected. • Check if an "H" signal is output to Pin 93 of the XDVDRST terminal.
All operation keys are disabled.	The unit recognizes that an operation key has already been pressed.	If no operation key has been pressed, check if the voltage at Pins 18 and 19 of the KEY input terminal is 5 V. If it is not, check if the operation switch on the line is in failure.

DVD Section

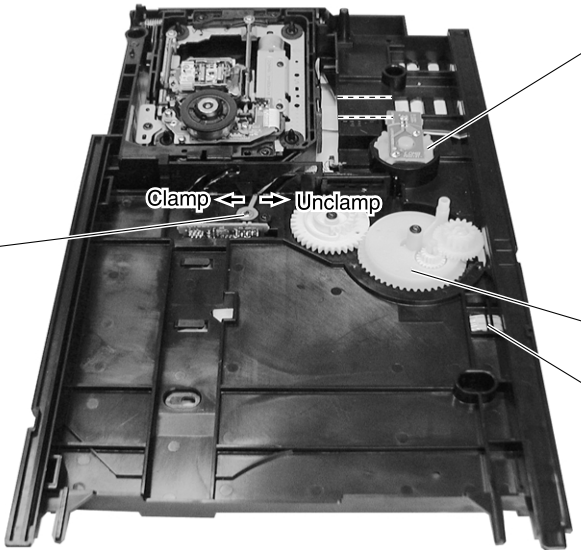
No.	Symptoms	Diagnosis Contents	Possible Defective Points
1	An opening screen is not displayed on the monitor (The FL display lights. The mechanism does not work.)	Is the level at both IC5501-pin 93 (XDVDRST) and pin 1(DVD ON/OFF) on the AF Assy "H" ?	µcom (AF IC5501)
		Check the voltage of CN911-pin 28 and 29 (VPR+8) on the DVDM Assy.	DVDM Assy CN911
		Check that the following voltages are output : IC411-pin 3 : 1.8V, IC421-pin 3 : 1.8V and IC431-pin 1 : 5V on the DVDM Assy	Each regulator on the DVDM Assy
		Are resonators (27MHz, 20MHz) on the DVDM Assy oscillating ?	Crystal resonator (DVDM Assy X601 and X301)
		Refer to contents of an FE error displayed on the FL display. (SRAM defectiveness, I2C communication line defectiveness, etc.)	FRONT END IC (DVDM IC301)
		• Is a signal input into IC601-pin 132 (CE3) on the DVDM Assy ? (Is a signal fluctuating for several seconds after the power is turned on ?) → Communication with flash ROM • Are the signals input into IC602-pin 16 (SMIWE), pin 19 (SMICS0) and pin 38 (SMICLK) on the DVDM Assy ? (Is a signal fluctuating ?) → Communication with flash ROM	• BACK END IC (DVDM IC601) • Flash ROM (DVDM IC603) • 64M SDRAM (DVDM IC602)
		Is a signal output from IC603-pin 28 (CPU_OE) on the DVDM Assy? (Is a signal fluctuating for several seconds after the power is turned on ?)	• BACK END IC (DVDM IC601) • Flash ROM (DVDM IC603)
		Is a signal input into IC5501-pin 67 (DVDACK) on the AF Assy ? (Is a signal fluctuating ?) → Communication with µcom	µcom (AF IC5501)
		Is a signal output from IC5501-pin 29 and 30 (SYS_1, 2) on the AF Assy ? (Is a signal fluctuating in the range of 0-5V ?)	µcom (AF IC5501)
		Are the signals output from IC5501-pin 23, 24 and 25 on the AF Assy ? (in the range of 0-5V)	µcom (AF IC5501) – BACK END IC (DVDM IC601) communication line
2	An opening screen is not displayed on the monitor (The FL display lights. The mechanism does not work.)	Check the video signal path between BACK END IC (DVDM IC601) and video-out terminal (see the block diagram)	DVDM Assy • Video circuit • after BACK END IC (IC601)
3	A tray cannot be opened. (An opening screen is displayed on the monitor)	• Are wires of CN123 on the DVDM Assy disconnected or damaged ? • Does the voltage of CN124 pin 3 to pin 6 on the DVDM Assy change normally ? • CN124 pin 6 (OPEN): Tray is fully closed: "H", Tray is fully opened: "L" • CN124 pin 3 (CLAMP): Clamping: "L", Releasing the clamper: "H"	Connector / wire LOADING SW (SSRB S21) CLAMP SW (TRSB S11)
		• Is a LOAD-DRVC signal reaching ? • Are the signals output from IC151 pin 9 and pin 8 on the DVDM Assy ? Pin 9: Approx. 6V during opening tray approx. 0V during closing tray. Pin 8: Approx. 0V during opening tray approx. 6V during closing tray. • Does the voltage of CN122 pin 17 change by pressing the Inside switch.	BACK END IC (DVDM IC601) Carousel driver (DVDM IC151) Inside switch
4	Rotary tray does not turn (Opening screen is OK)	• Check each cable (DVDM – TRSB/TRSB – SSRB/SSRB – TRAY motor) • Is a signal output from IC601-pin 114 (ROT DRV) on the DVDM Assy ? (Is a signal fluctuating of 0-3.3V ?) • Is the motor drive voltage output it at CN124 pin 7 and pin 8 ?	Connector / cable BACK END IC (DVDM IC601) IC151 and peripheral parts of the DVDM Assy

No.	Symptoms	Diagnosis Contents	Possible Defective Points
5	Initialization operation of the table mechanism is not completed. (Rotary tray does not stop at the right position.)	• While a tray rotates, is a signal output from CN124-pin 5 (TRAY POS) on the DVDM Assy ? (Is a signal fluctuating in the range of 0-3V ?) • While a tray rotates, is a signal outputting from CN124-pin 4 (DISC SENS) on the DVDM Assy ? (Is a signal fluctuating in the range of 0-3V ?)	Connector / cable Tray Position Sensor (SSRB PC22) Disc Sensor (SSRB PC21)
6	Playback impossible (no focusing)	Are the signals output from IC101-pin 34 (F_DRV) and pin 35 (F_RTN) on the DVDM Assy ?	FTS Driver IC (DVDM IC101)
		Does 650-nm LD emit light ? Does a pickup lens move up / down ? Does an actuator spring bend ?	Pickup
		• Are plastic parts damaged? Or is a shaft detached? • Is the turntable detached or tilted?	Mechanism section
		Is flexible cable of CN121 on the DVDM Assy disconnected or damaged ?	Flexible cable / connector
		Is signal output from IC301-pin 33 (FACT) on the DVDM Assy ? (Device control of about 2.6 V is output usually. It is fluctuated by about ± 100 mV with focus up / down.)	FRONT END IC (DVDM IC301)
7	Playback impossible (Spindle does not turn)	Are the signals output from IC101-pin 12 (A3), pin 13 (A2) and pin 14 (A1) on the DVDM Assy ? Is pin 41 fixed LOW and is pin 38 fixed HIGH ?	FTS Driver IC (DVDM IC101)
		Is there any part detached from the spindle motor? Or Is there any foreign object lodged in it?	Mechanism section (Spindle motor)
		Are wires of CN122 (DVDM Assy) and CN3 (SSIB Assy) disconnected or damaged ?	Flexible cable / connector
		Is signal output from IC301-pin 44 (SPDL_PDM) on the DVDM Assy ?	FRONT END IC (DVDM IC301)
8	Playback impossible (Playback stops)	Does 650-nm LD deteriorate ? If the voltage at both ends of R201 on the DVDM Assy is 0.7 V or more, the 650-nm LD is definitely deteriorated.	650-nm LD deteriorated. (When playback of a DVD is impossible)
		Does 780-nm LD deteriorate ? If the voltage at both ends of R211 on the DVDM Assy is 1.5 V or more, the 780-nm LD is definitely deteriorated.	780-nm LD deteriorated. (When playback of CD is impossible)
		Is there abnormality in FG waveform ?	FG output : FTS Driver IC (DVDM IC101)
		Are there scratches or dirt on the disc ?	Disc
9	Picture disturbance during playback (block noise, freeze, other)	Are there scratches or dirt on the disc ?	Disc
		Is there a problem with the format of the disc?	Disc
10	No sound (Picture is normal)		
		Is signal output from DOUT signal (CN911-pin 21) on the DVDM Assy ?	DVDM CN911-pin 21

Table Mechanism Section

Symptom	Possible Cause	Location of Trouble
The tray does not open. (Nothing works) Press the POWER OFF key. → The "OFF" indication does not disappear. Press the ⏏ (OPEN) key. → The "OPEN" indication does not disappear. Press the ► (PLAY) key. → The indication changes from "NO DISC" to "OPEN," and the unit does not operate. (When a disc is not loaded in the tray.)	• Damage of the loading motor • Disconnection, breaking, or damage of the jumper wire	➡ ①
The tray does not open. (A continuous clatter is heard.) Tray No. indications 1 to 5 are flashing. 	• Disconnection, breaking, or damage of the flexible cable (7P) • Breaking or damage of the tray open/close position switch (S21)	➡ ② ➡ ③
The tray opens by itself when the power is turned on and stays open.	• Disconnection, breaking, or damage of the flexible cable (8P)	➡ ④
The rotary tray does not stop at its home position. (It may stop suddenly during rotation.)	• Breaking or damage of the tray position detect sensor (PC22)	➡ ⑤
The indication "CHANGE" does not change when the power is turned on. The rotary tray does not rotate. (Opening and closing of the tray are possible.)	• Damage of the motor for the rotary tray drive • Disconnection, breaking, or damage of the jumper wire	➡ ⑥
A clatter is heard when the disc is clamped.	• The gears of the planet base are not engaged correctly.	➡ ⑦
The rotation of the rotary tray does not stop after the power is turned on. Two or more disc loading indications light for tray Nos. 1 to 5. **Examples:** Normal condition: Abnormal condition:  One indication lights. Two indications light.	The slit part on the bottom of the rotary tray is damaged.	➡ ⑧
The rotary tray rattles while rotating. When the rotary tray rotates, a rattling sound is heard.	• Damage of the worm gear • Insufficient lubricant	➡ ⑨
Even during playback, the indication "NO DISC" is displayed. It takes longer than normal until playback starts.	• Breaking or damage of the disc detect sensor (PC21)	➡ ⑩

Location



① Carriage Motor : VXM1033
(for LOADING)

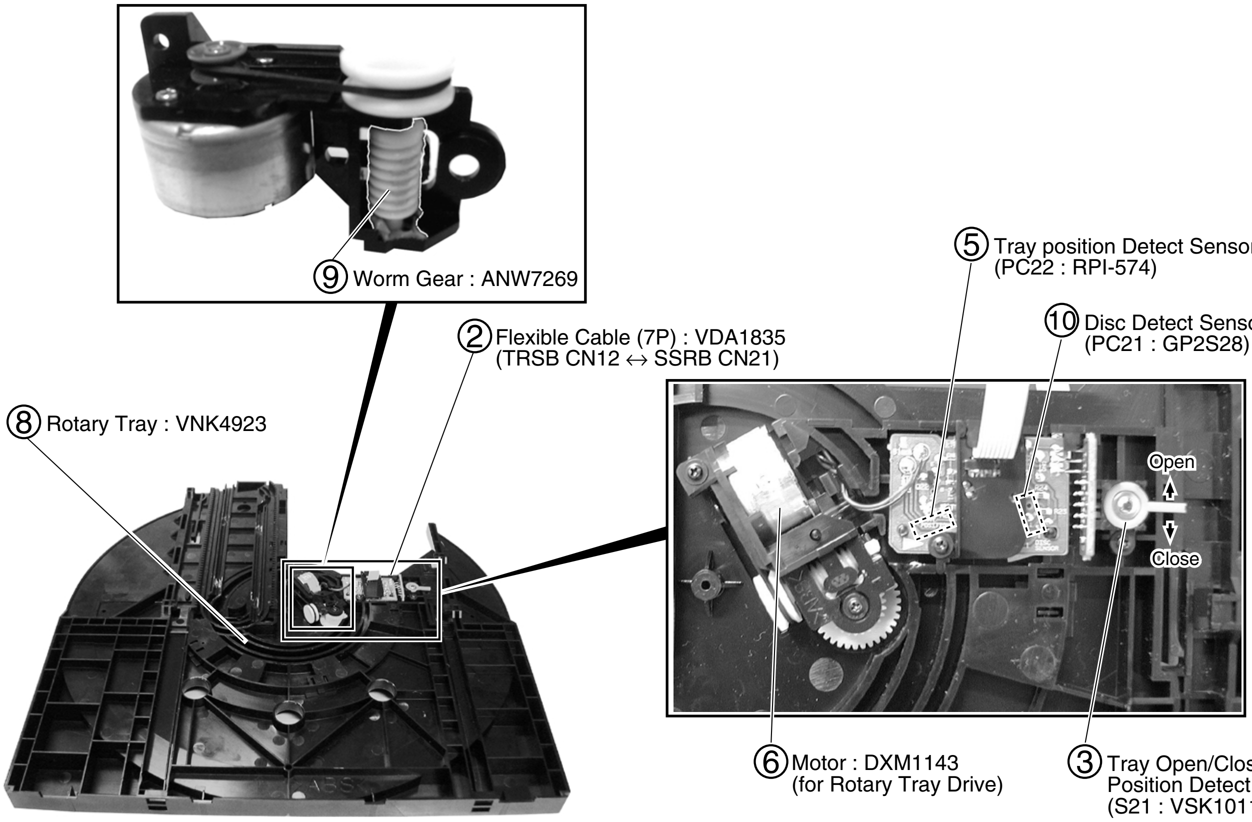
Operation :
Tray open → close
↓ Continuous action
Traverse Mecha. clamp → unclamp

* **When continued turning Gear pulley by hand**
Tray open → close → Disc clamp → open
Disc exchange operation

Disc Clamp Detect SW
(S11 : VSK1011)

⑦ Planet Base : ANW7258

④ Flexible Cable (8P)
(TRSB CN11 ↔ DVDM CN124)



⑨ Worm Gear : ANW7269

⑤ Tray position Detect Sensor
(PC22 : RPI-574)

⑩ Disc Detect Sensor
(PC21 : GP2S28)

② Flexible Cable (7P) : VDA1835
(TRSB CN12 ↔ SSRB CN21)

⑧ Rotary Tray : VNK4923

⑥ Motor : DXM1143
(for Rotary Tray Drive)

③ Tray Open/Close
Position Detect SW
(S21 : VSK1011)

7.1.9 DSP TROUBLE SHOOTING

Detectable DSP Errors

The following conditions are assumed,
in order to eliminate causes other than "DSP-assy" and "between DSP-assy and microcomputers".
- Electric power is correctly supplied to DSP-assy.
- The SPDIF signal is coming to the input port of DIR ("COAX IN" RX0 & "OPT IN" RX3 & "DVD" RX7).
- There is no audio output from DSP-assy, or audio output is unusual.

Check the signal route by referring the connection diagram between U-com and DSP module IC (next page).

* "U", "M" display below is a sample.
Those character display ON/OFF depends on the state.

- **ERR_0 : –Cannot receive data from DIR–** FL `DIRERR-UM`
  →Communication fault has occurred somewhere between DIR (PinNo.32 CDTO)–Level Shifter (IC8702)– µ-com (PinNo.80 DIRDO).
  →Communication fault has occurred somewhere between the µ- com-port (*1) which has sent the signal and each IC.

- **ERR_1 : –Cannot receive data from DSP–** FL `DSPERR-UM`
  →Communication fault has occurred somewhere between DSP (PinNo.144 DSDO)–Level Shifter (IC8702)–µ-com (PinNo.50 DSPDO).
  →Communication fault has occurred somewhere between the µ-com-port (*1) which has sent the signal and each IC.
  →Communication fault has occurred somewhere between the DIR and DSP.

- **ERR_2 : –There is no return value of HREQ.–** FL `HREQ  -UM`
  →Communication fault has occurred somewhere between DSP (PinNo.3 HREQ)–Level Shifter (IC8702)–µ-com (PinNo.82 DSPHREQ).
  →Communication fault has occurred somewhere between the µ-com-port (*1) which has sent the signal and each IC.
  →Communication fault has occurred somewhere between the DIR and DSP.

- **ERR_3 : –ERR information from DSP–** FL `DSP NG-UM`
  →Communication fault has occurred somewhere between the µ-com-port (*1) which has sent the signal and each IC.
  (especially the fault inside DSP)
  →Communication fault has occurred somewhere between the DIR and DSP.

- **ERR_4 : –DECOMUTE continues being LOW(MUTE).–** FL `DMUTE -  M`
  →Communication fault has occurred somewhere between DSP (PinNo.21 PB12)–Level Shifter (IC8702)–µ-com (PinNo.86 DECMUTE).
  →Communication fault has occurred somewhere between the É com-port (*1) which has sent the signal and each IC.
  →Communication fault has occurred somewhere between the DIR and DSP.

Although the following are not errors, they are displayed separately and are helpful in finding a solution.

- **INFO_0 : –DIRERR is HIGH (UNLOCK) in digital function.–** FL `DSP OK-UM`
  If DIRERR continues being HIGH (UNLOCK) without the above-mentioned error display.
  →Communication fault has occurred in somewhere between DIR (PinNo.36 INT0)–Level Shifter (IC8702)–µ-com (PinNo.77 DIRERR).
  →Check that the external set and this model is properly connected by the digital cable when selecting LINE2 (External Digital) function.

- **INFO_1 : –DSPMUTE is LOW (MUTE).–** FL `DSP OK- M`
  If DSPMUTE continues being LOW (MUTE) without the above-mentioned error display.
  →Communication fault has occurred somewhere between µ-com (PinNo.86 DSPMUTE)–connector (CN8011 and CN8012 No.19 MUTEOUT).

- **INFO_2 : –Loading 88.2kHz/96kHz PCM–** FL `DSP OK- 9`
  DSP function is limited when this information is displayed.

Notes :
Only the high priority error (near to ERR_0) is displayed when the multiplel errors have occurred.

When the analog audio output of a DSP module is unusual but the above error information is not displayed, the fault is probably in the CODEC IC (IC8401) and the peripheral circuits.
As the µ-com has not received data from the CODEC IC, it cannot detect the fault and display the error information.

*1 : μ-com-port which has sent the signal to IC

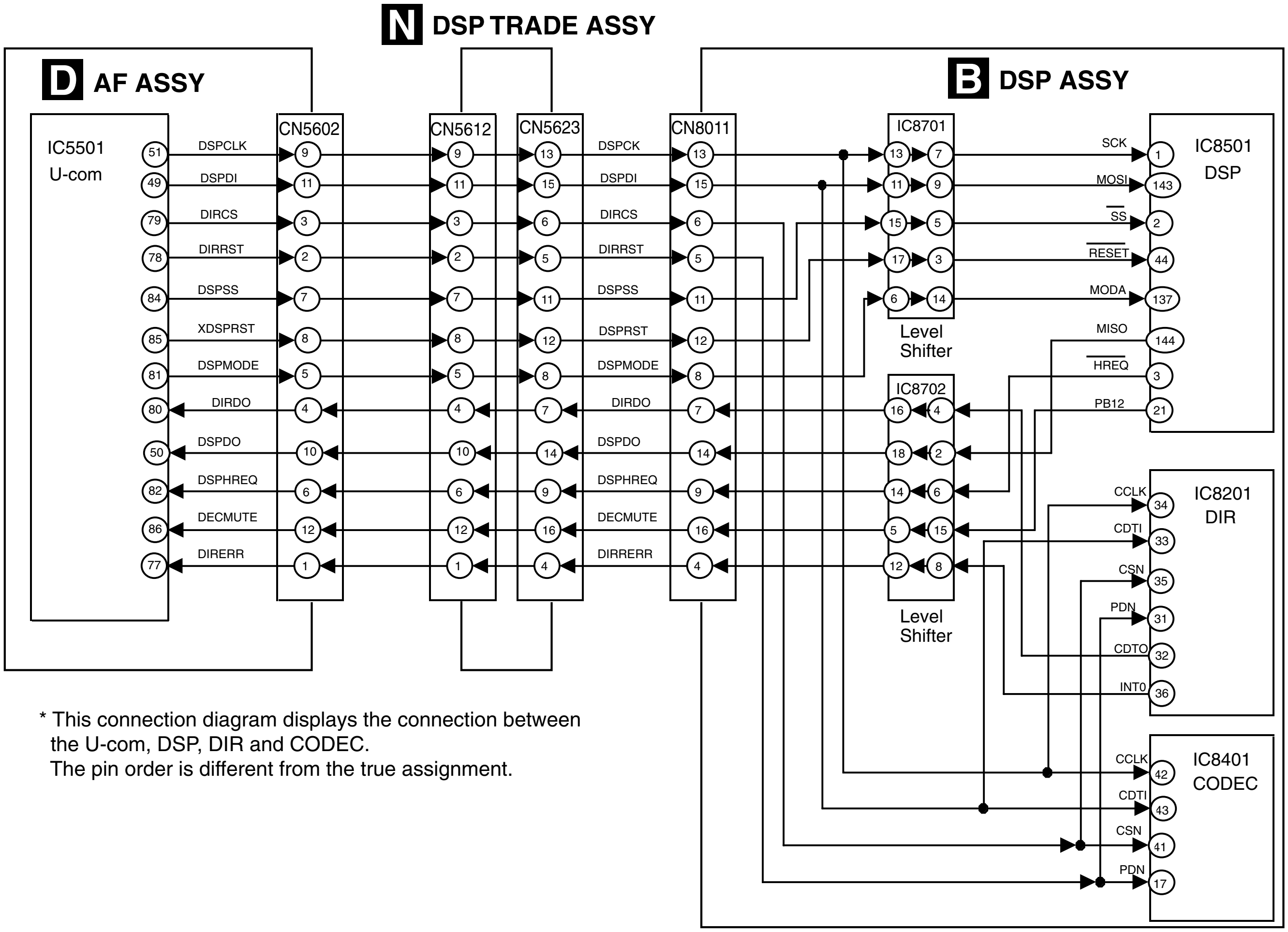
IC5501 μ-com port			IC8201 DIR port		IC8401 CODEC port	
Pin No.	Pin Name		Pin No.	Pin Name	Pin No.	Pin Name
No.51	DSPCLK	→	No.34	CCLK	No.42	CCLK
No.49	DSPDI	→	No.33	CDTI	No.43	CDTI
No.79	DIRCS	→	No.35	CSN	No.41	CSN
No.78	DIRRST	→	No.31	PDN	No.17	PDN

IC5501 μ-com port			IC8501 DSP port	
Pin No.	Pin Name		Pin No.	Pin Name
No.51	DSPCLK	→	No.1	SCK
No.49	DSPDI	→	No.143	MOSI
No.84	DSPSS	→	No.2	$\overline{\text{SS}}$
No.85	XDSPRST	→	No.44	$\overline{\text{RESET}}$
No.81	DSPMODE	→	No.137	MODA

IC5501 μ-com port			IC8201 DIR port	
Pin No.	Pin Name		Pin No.	Pin Name
No.80	DIRDO	←	No.32	CDTO
No.77	DIRERR	←	No.36	INT0

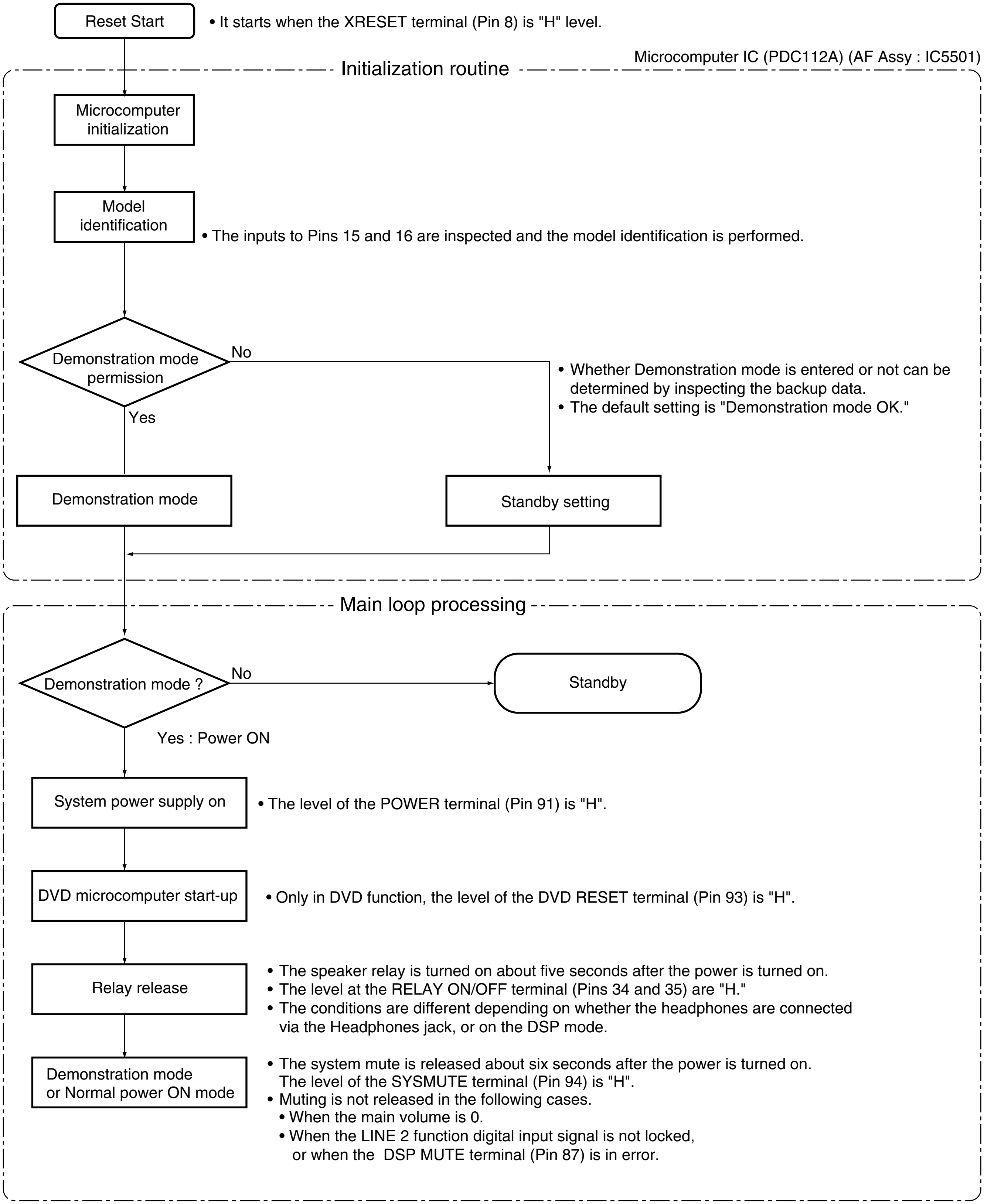
IC5501 μ-com port			IC8501 DSP port	
Pin No.	Pin Name		Pin No.	Pin Name
No.50	DSPDO	←	No.144	MISO
No.82	HREQ	←	No.3	HREQ
No.86	DECMUTE	←	No.21	PB12 MUTE

■ CONNECTION DIAGRAM


N DSP TRADE ASSY
D AF ASSY
B DSP ASSY
IC5501
U-com
CN5602
CN5612
CN5623
CN8011
IC8701
Level Shifter
IC8702
Level Shifter
IC8501
DSP
IC8201
DIR
IC8401
CODEC
DSPCLK
DSPDI
DIRCS
DIRRST
DSPSS
XDSPRST
DSPMODE
DIRDO
DSPDO
DSPHREQ
DECMUTE
DIRERR
DSPCK
DSPRST
DIRRERR
SCK
MOSI
SS
RESET
MODA
MISO
HREQ
PB12
CCLK
CDTI
CSN
PDN
CDTO
INT0

* This connection diagram displays the connection between the U-com, DSP, DIR and CODEC.
The pin order is different from the true assignment.

7.1.10 SEQUENCE AFTER POWER ON


Reset Start
Microcomputer IC (PDC112A) (AF Assy : IC5501)
Initialization routine
Microcomputer initialization
Model identification
Demonstration mode permission
No
Yes
Demonstration mode
Standby setting
Main loop processing
Demonstration mode ?
No
Standby
Yes : Power ON
System power supply on
DVD microcomputer start-up
Relay release
Demonstration mode or Normal power ON mode

- It starts when the XRESET terminal (Pin 8) is "H" level.
- The inputs to Pins 15 and 16 are inspected and the model identification is performed.
- Whether Demonstration mode is entered or not can be determined by inspecting the backup data.
- The default setting is "Demonstration mode OK."
- The level of the POWER terminal (Pin 91) is "H".
- Only in DVD function, the level of the DVD RESET terminal (Pin 93) is "H".
- The speaker relay is turned on about five seconds after the power is turned on.
- The level at the RELAY ON/OFF terminal (Pins 34 and 35) are "H."
- The conditions are different depending on whether the headphones are connected via the Headphones jack, or on the DSP mode.
- The system mute is released about six seconds after the power is turned on. The level of the SYSMUTE terminal (Pin 94) is "H".
- Muting is not released in the following cases.
  - When the main volume is 0.
  - When the LINE 2 function digital input signal is not locked, or when the DSP MUTE terminal (Pin 87) is in error.

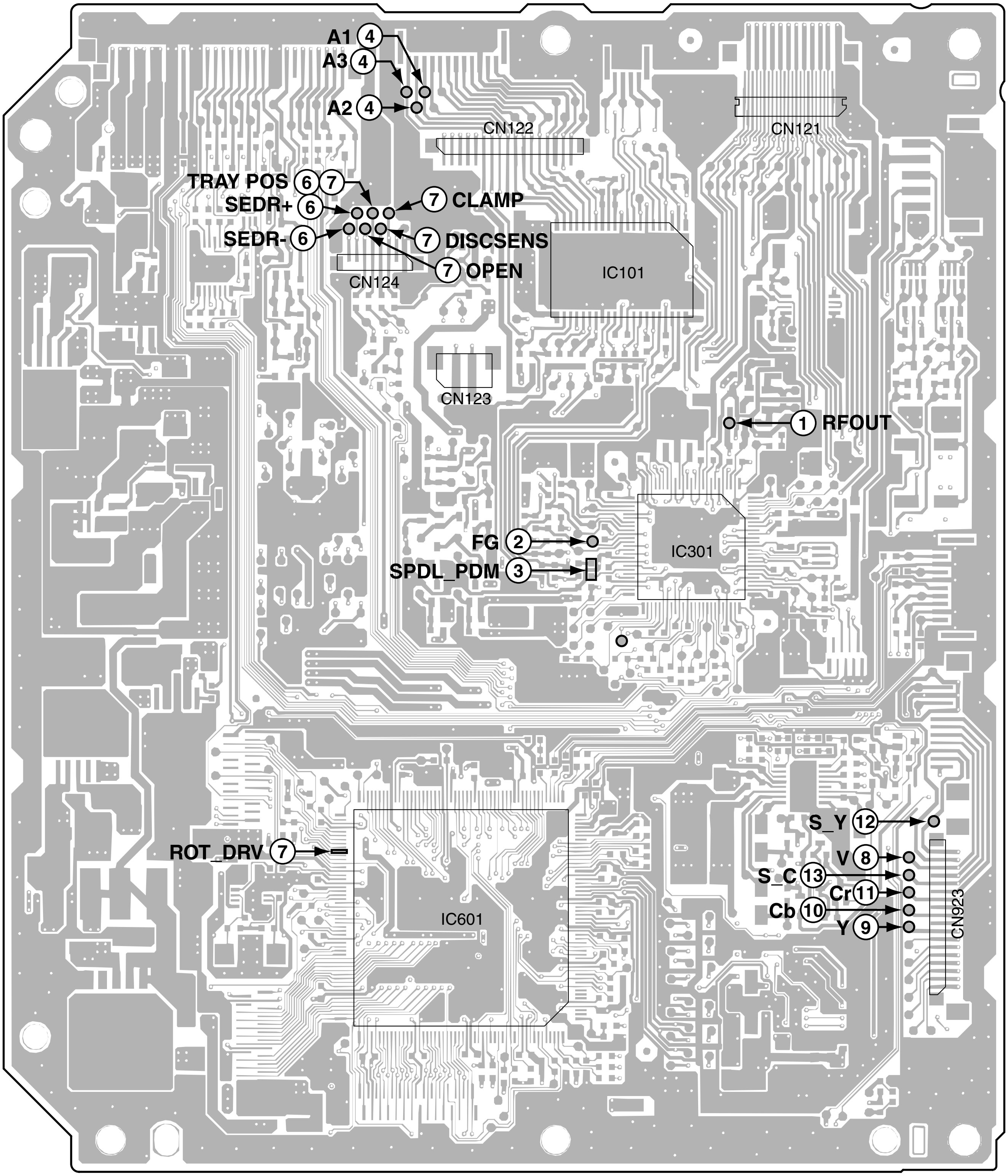
- If no pulse is input to the AC terminal (Pin 4) for about 60 msec when the microcomputer is in Memory Backup mode, it will not do any processing.
- The unit will recover from Memory Backup mode if a reset command is input to the XRESET terminal (Pin 8).

7.1.11 WAVEFORM POINTS LOCATION

SIDE A

SIDE A

A DVDM ASSY


A1 4
A3 4
A2 4
CN122
CN121
TRAY POS 6 7
SEDR+ 6
7 CLAMP
SEDR- 6
7 DISCSENS
7 OPEN
CN124
IC101
CN123
1 RFOUT
FG 2
SPDL_PDM 3
IC301
S_Y 12
ROT_DRV 7
V 8
S_C 13
Cr 11
Cb 10
Y 9
IC601
CN923

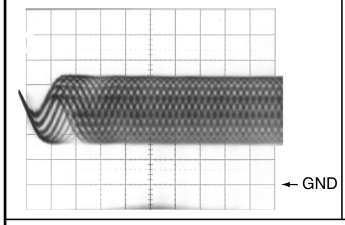
Front Side

A DVDM ASSY

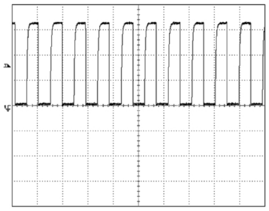
Note : The encircled numbers denote measuring point in the schematic diagram.

Measurement condition : No. 1 to 2 and 8 to 13 : reference A1 (DVD), T2-chp 19, Color -bar

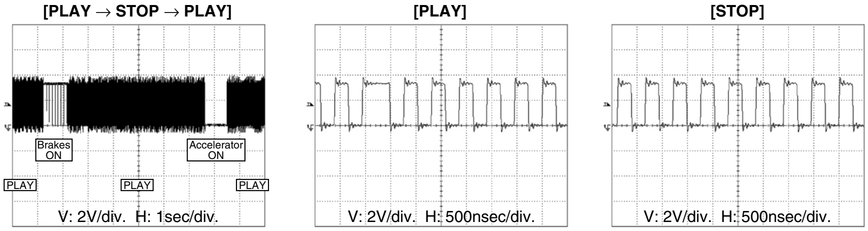
① **IC301-pin 4 (RFOUT)**
V: 200mV/div. H: 0.1µsec/div.



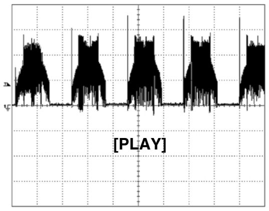
② **IC301-pin 36 (FG)**
V: 1V/div. H: 5msec/div.



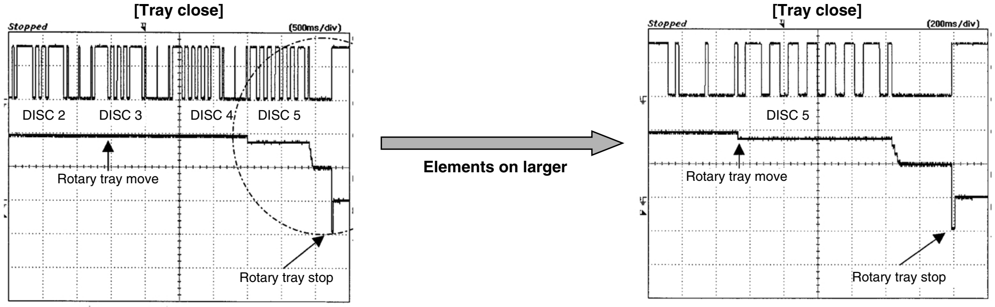
③ **IC301-pin 44 (SPDL_PDM)**



④ **CN122-pin 8, 7, 6 (FTS Driver -A1, A2, A3)**
V: 2V/div. H: 2msec/div.



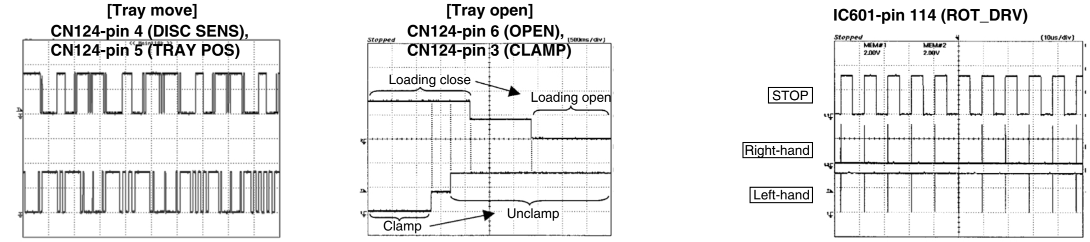
⑥ **CN124-pin 5 (TRAY POS)**
CN124-pin 7, 8
(Rotating Tray Motor drive voltage)



V: 2V/div. H: 500msec/div.

V: 2V/div. H: 200msec/div.

⑦ **CN124-pin 4, 5, 6, 3**
IC601-pin 114

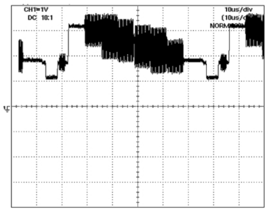


V: 2V/div. H: 1sec/div.

V: 2V/div. H: 500msec/div.

V: 2V/div. H: 10µsec/div.

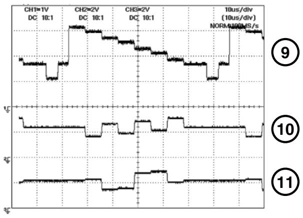
⑧ **CN923-pin 16 (Composite Video out)**
V: 1V/div. H: 10µsec/div.



⑨ **CN923-pin 8 (Component Video out-Y)**
V: 1V/div. H: 10µsec/div.

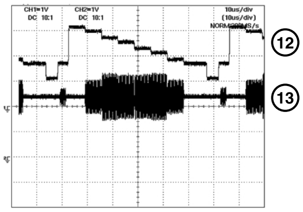
⑩ **CN923-pin 10 (Component Video out-Pb)**
V: 2V/div. H: 10µsec/div.

⑪ **CN923-pin 12 (Component Video out-Pr)**
V: 2V/div. H: 10µsec/div.



⑫ **CN923-pin 18 (S Video out-Y)**
V: 1V/div. H: 10µsec/div.

⑬ **CN923-pin 14 (S Video out-C)**
V: 1V/div. H: 10µsec/div.



7.1.12 PROTECTION CIRCUIT

If the TIMER LED on the front panel flashes, check the protection circuit.
Note: If the protection circuit activates, the unit will not recover for 60 seconds even if the AC power cord is disconnected then reconnected. If you activate Service Test mode, the protection circuit becomes invalid, which makes diagnosis easy. (To activate Service Test mode, while holding the STOP key and the DISC 1 key pressed, press the STANDBY/ON key.)
There are three types of operations for the protection circuit, which are indicated on the FL display when Service Test mode is entered:

PRTCT WNG: The unit was shut down because of an abnormality in the AMP system. (The PROTECT line operates at the MID level.)
PRTCT ERR: The unit was shut down because of a failure in the AMP system. (The PROTECT line operates at the LO level.)
DVD PRTECT: The unit was shut down because of a failure in the DVD system. (The VDET line operates at the HI or LO level.)

■ Conditions for the protect circuit operations

	Voltage		Conditions	FL display in Service Test mode
PROTECT	HI level	>3.55V	Normal	
	MID level	1.8V - 3.5V	The unit is shut down because of an abnormality.	PRTCT WNG
	LO level	<1.8V	The unit is shut down because of a failure.	PRTCT ERR
VDET	HI level	>4.25V	The unit is shut down because of a failure.	DVD PRTECT
	MID level	3.3V	Normal	
	LO level	<2.5V	The unit is shut down because of an abnormality.	DVD PRTECT

The possible failures for each error message are as follows:

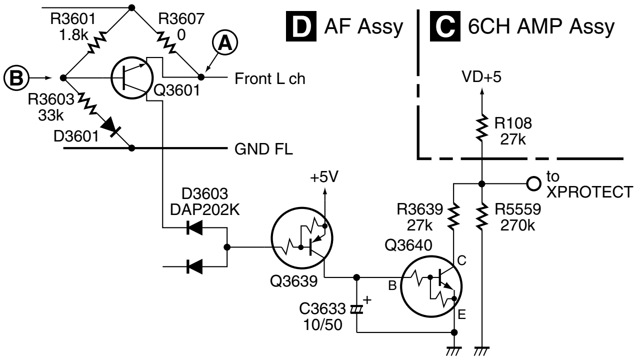
PRTCT WNG:
- The Speaker terminal became overloaded because of short-circuit. (See ①.)

PRTCT ERR:
- The main power supply became LO level because of short-circuit or disconnection of connectors. (See ②.)
- Disconnection of the FAN connector or interruption of rotation of the fan (See ③.)
- DC was generated at the output because of a failure in the AMP system, etc. (See ④.)
- Abnormal temperature was detected by the thermistor. (See ⑤.)

DVD PRTECT:
- An error was generated in the main power supply inside the DVDM. (See ⑥.)

■ Protection circuit that activates against a PRTCT WNG error

① When the Speaker terminal becomes overloaded



In Normal mode, the speaker (6 ohms) is connected between the FL and GND FL points. Because the voltage at Point Ⓐ is higher than that at Point Ⓑ, Q3601 does not operate.

If the resistance between the FL and GND FL points becomes 1.83 ohms or less, Q3601 begins to operate, Q3639 is turned on, Q3640 (E, C, and B)is turned on, and the level of XPROTECT becomes MID.

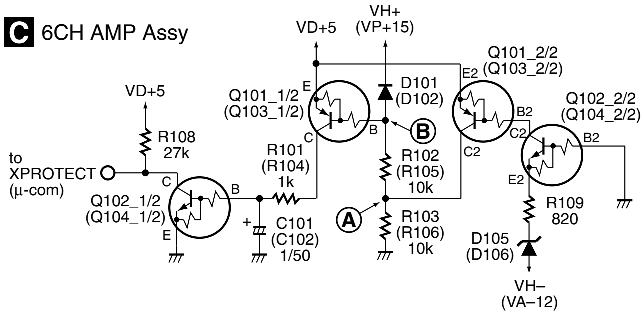
→ The microcomputer detects the XPROTECT level and shuts the power to the unit off.

■ Protection circuit that activates against a PRTCT ERR error

② When the main power supply becomes LO level because of short-circuit or disconnection of connectors

② -1 Short-circuit-detection circuit for the amplifier power circuit (+15 V[VP+15], VD+5, -12 V [VA-12])

Circuit for shutting the power off when VP+15, VD+5, or VA-12 is short-circuited to ground (GND)


C
6CH AMP Assy
VD+5
VH+
(VP+15)
Q101_1/2
(Q103_1/2)
D101
(D102)
Q101_2/2
(Q103_2/2)
Q102_2/2
(Q104_2/2)
VD+5
R108
27k
to
XPROTECT
(µ-com)
Q102_1/2
(Q104_1/2)
C
B
E
R101
(R104)
1k
C101
(C102)
1/50
Ⓐ
Ⓑ
R102
(R105)
10k
R103
(R106)
10k
E2
B2
C2
R109
820
D105
(D106)
VH–
(VA–12)

- In Normal mode, as Q101 (Q103) (E2, B2, C2) and Q102 (Q104) (E2, B2, C2) are on, the voltage at Point Ⓐ is about 5 V. The voltage at Point Ⓑ is therefore about the same. As Q101 (Q103) (E, C, B) is off, Q102 (Q104) (E, C, B) is also off.

(1) When VH+(VP+15) is short-circuited to GND

As the voltage at Point Ⓑ becomes almost ground potential, and Q101 (Q103) (E, C, B) then Q102 (Q104) (E, C, B) are turned on, the level of XPROTECT becomes low.

→ The microcomputer detects the XPROTECT level and shuts the power to the unit off.

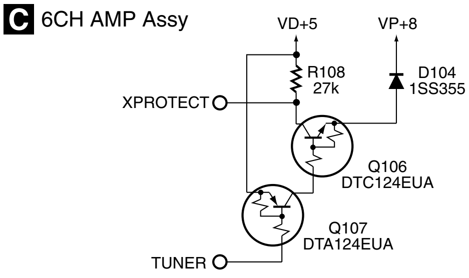
(2) When VH-(VA-12) is short-circuited

As the electric potential of VE at Q102 (Q104) (E2, C2, B2) becomes the same as that at VB, Q102 (Q104) (E2, C2, B2) is turned off. Following this, Q101 (Q103) (E2, B2, C2) is turned off, which changes the voltage at Points Ⓐ and Ⓑ to a value other than 5 V. Therefore, Q101 (Q103) (E, C, B) then Q102 (Q104) (E, C, B) are turned on, the level of XPROTECT becomes low.

(3) When VD+5 is short-circuited

The level of the XPROTECT line becomes low. The microcomputer detects the XPROTECT level and shuts the power to the unit off.

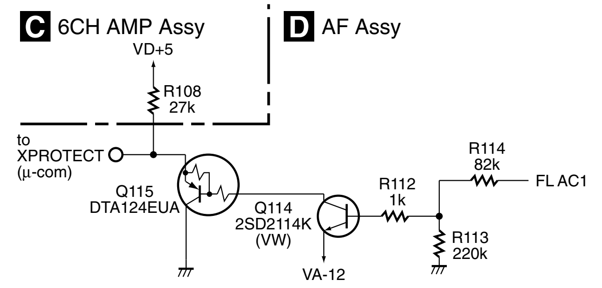
② -2 Short-circuit-detection circuit for the DVD power supply (VP+8)


C
6CH AMP Assy
VD+5
VP+8
R108
27k
D104
1SS355
XPROTECT
Q106
DTC124EUA
Q107
DTA124EUA
TUNER

As the TUNER line is fixed to GND level, Q107 is always on. If the level at VP+8 falls to GND level because of short-circuit, etc., Q106 is turned on, and the level of the XPROTECT line becomes low.

← The microcomputer detects the XPROTECT level and shuts the power to the unit off.

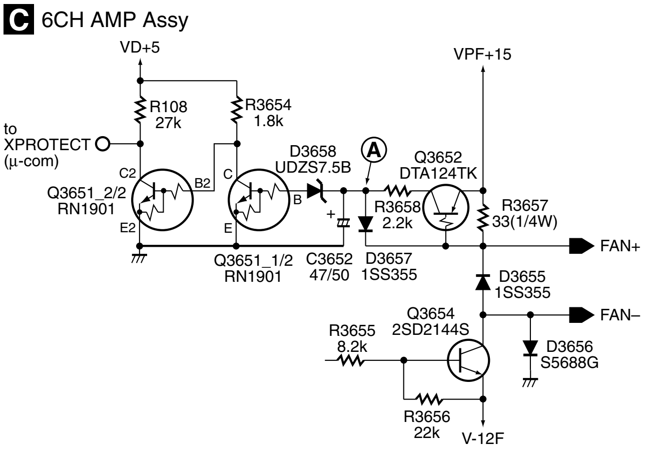
② -3 Short-circuit-detection circuit for VFDP


C
6CH AMP Assy
D
AF Assy
VD+5
R108
27k
to
XPROTECT
(µ-com)
Q115
DTA124EUA
Q114
2SD2114K
(VW)
VA-12
R112
1k
R114
82k
FL AC1
R113
220k

If VFDP is short-circuited to GND, or if the DC electric potential at FL AC1 becomes GND level (in Normal mode: about -27 V) because of a failure in the DC bias circuit of FL AC1, Q107 then Q115 are turned on, and the level of XPROTECT becomes low.

→ The microcomputer detects the XPROTECT level and shuts the power to the unit off.

③ When the FAN connector is disconnected or when rotation of the fan is interrupted

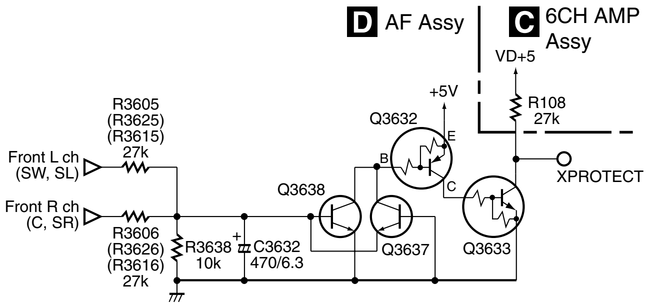

C
6CH AMP Assy
VD+5
VPF+15
R108
27k
R3654
1.8k
to
XPROTECT
(µ-com)
D3658
UDZS7.5B
Ⓐ
Q3652
DTA124TK
Q3651_2/2
RN1901
C2
B2
E2
C
B
E
R3658
2.2k
R3657
33(1/4W)
FAN+
Q3651_1/2
RN1901
C3652
47/50
D3657
1SS355
D3655
1SS355
Q3654
2SD2144S
FAN–
R3655
8.2k
D3656
S5688G
R3656
22k
V-12F

If no fan is connected between FAN+ and FAN-, or when the fan cannot rotate because of a foreign object caught in the blades, the BASE of Q3652 becomes OPEN, and Q3652 and Q3651 (E, C, B) are turned off. Then Q3651 (E2, B2, C2) is turned on, and the level of XPROTECT becomes low.

→ The microcomputer detects the XPROTECT level and shuts the power to the unit off.

When FAN+ and FAN- are short-circuited, the electric potential at Point Ⓐ becomes higher than GND level by the addition of the values at D3656 and D3657. As this value is lower than that at D3658, Q3651 (E, C, B) is turned off, Q3651 (E2, B2, C2) is turned on, and the level of XPROTECT becomes low.

④ When DC is generated at the output because of a failure in the AMP system, etc.


D AF Assy
C 6CH AMP Assy
VD+5
R108
27k
+5V
Q3632
E
B
C
R3605
(R3625)
(R3615)
27k
Front L ch
(SW, SL)
Front R ch
(C, SR)
R3606
(R3626)
(R3616)
27k
R3638
10k
C3632
470/6.3
Q3638
Q3637
Q3633
XPROTECT

- In Normal mode, both Q3637 and Q3638 are off.

(1) When positive (+) DC voltage is generated at the SP terminal

When positive (+) DC voltage is generated at the L or R channel, and VB of Q3637 becomes higher than that at the operation point, Q3632 (E, C, B) is turned on, and the level of XPROTECT becomes low.

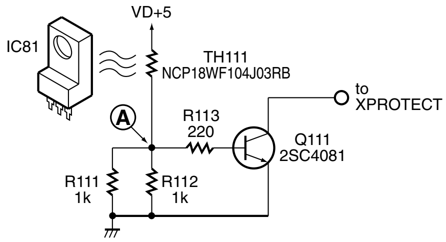
→ The microcomputer detects the XPROTECT level and shuts the power to the unit off.

(2) When negative (-) DC voltage was generated at the SP terminal

Q3638 is turned on, and XPROTECT is activated.

⑤ When abnormally high temperature is detected by the thermistor

⑤ -1 IC81 abnormal temperature detection circuit

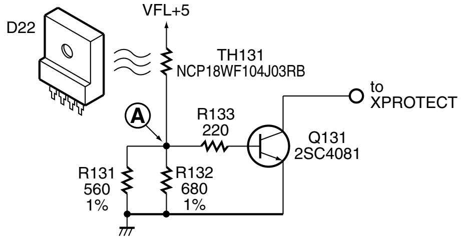

IC81
VD+5
TH111
NCP18WF104J03RB
to
XPROTECT
Ⓐ
R113
220
Q111
2SC4081
R111
1k
R112
1k

The voltage at Point Ⓐ becomes the divided voltage of TH111 and R111//R112 (combined resistance of parallel-connected resistors R111 and R112.) In Normal mode, the resistance at TH111 is much higher than R111//R112, and Q111 is off. (Note that the resistance at TH111 becomes lower as the temperature increases.) If the solder temperature at IC81 increases abnormally, the temperature at TH111 (thermistor) mounted closest to the land of IC81 increases accordingly, and the resistance at TH111 decreases.

When the temperature at TH111 reaches 90-110_C (varying according to conditions,) the voltage at Point (A) becomes high enough to turn Q111 on, and the level of the XPROTECT line becomes low. The microcomputer detects the XPROTECT level and shuts the power to the unit off.

⑤ -2 D22 abnormal temperature detection circuit

If the solder temperature at D22 becomes abnormally high because of short-circuiting between AC - and +, or AC - and -, this protection circuit is activated.

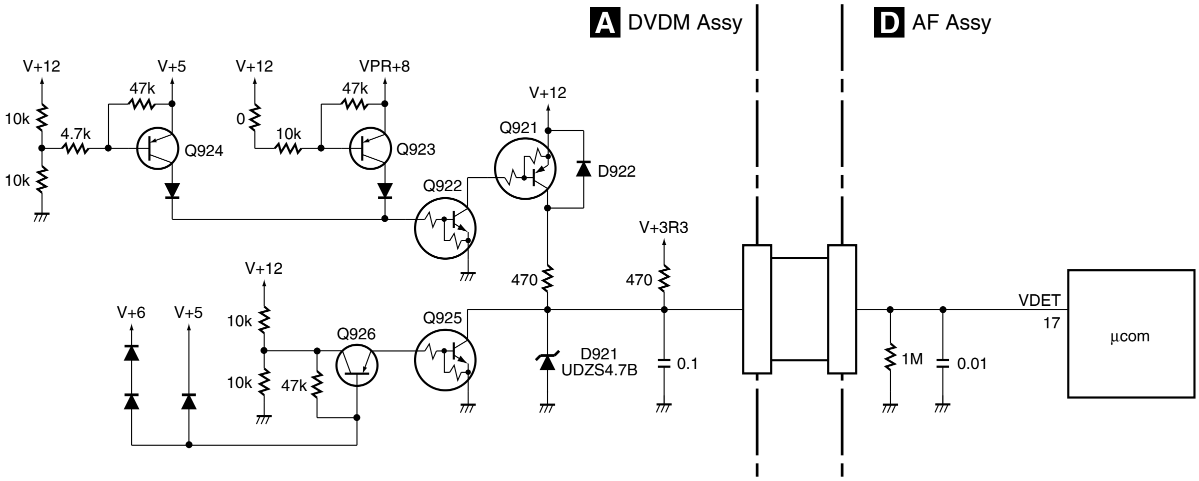

D22
VFL+5
TH131
NCP18WF104J03RB
to
XPROTECT
Ⓐ
R133
220
Q131
2SC4081
R131
560
1%
R132
680
1%

The voltage at Point Ⓐ becomes the divided voltage of TH131 and R131//R132 (combined resistance of parallel-connected resistors R131 and R132.) In Normal mode, the resistance at TH131 is much higher than R131//R132, and Q131 is off. (Note that the resistance at TH131 becomes lower as the temperature increases.) If the solder temperature at D22 increases abnormally, the temperature at TH131 (thermistor) mounted closest to the land of D22 increases accordingly, and the resistance at TH131 decreases.

When the temperature at TH131 reaches 107-125_C (varying according to conditions,) the voltage at Point (A) becomes high enough to turn Q131 on, and the level of the XPROTECT line becomes low. The microcomputer detects the XPROTECT level and shuts the power to the unit off.

■ Protection circuit that activates against a DVD PRTECT error

⑥ The DVDM monitors the voltage of the main power supply by VDET signals.
In Normal mode, the VDET signal is at the MID level (3.3 V). In the following conditions, the VDET signal level becomes L or H, and the microcomputer is notified of this abnormality.


A DVDM Assy
D AF Assy
V+12
V+5
V+12
VPR+8
47k
47k
10k
0
4.7k
10k
Q924
Q923
10k
V+12
Q921
D922
Q922
V+3R3
V+12
470
470
V+6
V+5
10k
Q926
Q925
VDET
17
D921
UDZS4.7B
0.1
1M
0.01
µcom
10k
47k

Items to be detected by VDET

(1) When the power voltages inside the DVDM become abnormal, as shown in the table below

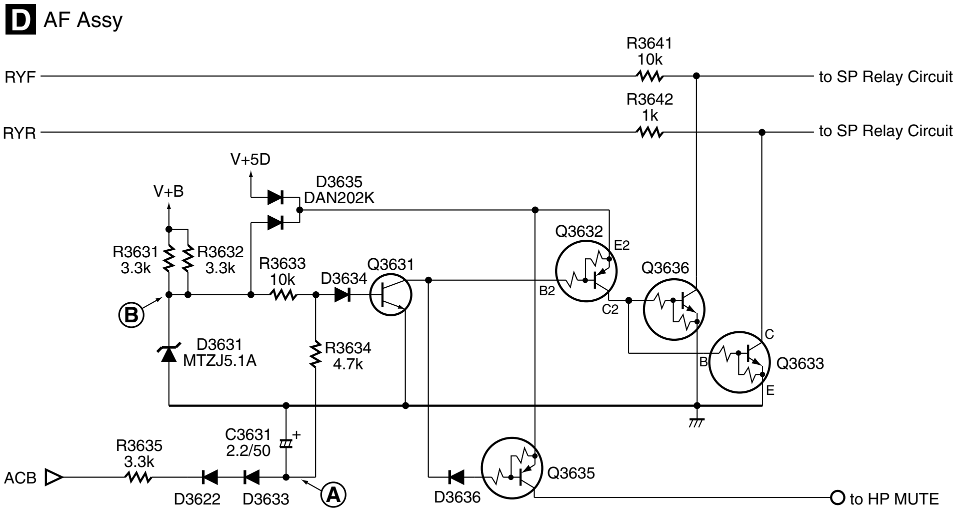
Status	Power	Voltage	Operation								VDET voltage
			Q923	Q924	Q922	Q921	D921	D922	Q926	Q925	
In Normal mode			off	off	off	off	off	off	off	off	Mid
When an abnormality is generat	VDVD+12	<1V	(on)	(on)	(on)	(off)	off	on	off	off	L
		>15.5V	off	off	off	off	off	off	on	on	L
	VPR+8	<5.2V	–	off	off	off	off	–	on	on	L
		>12.6V	–	on	on	on	on	–	off	off	H
	V+6	<3V	–	–	–	–	–	–	on	on	L
	V+5	<3.6V	–	off	off	off	off	–	on	on	L
		>6.6V	–	on	on	on	on	–	off	off	H
	V+3R3	<2.5V	–	–	–	–	–	–	–	–	L
		>4.25V	–	–	–	–	(on)	–	–	–	H

(2) When the VDET signal to the microcomputer is interrupted because of defective soldering of the 30-pin connector or incomplete insertion of FFC
→ The VDET level is lowered by the pull-down resistor (1 Mohms) on the side of the microcomputer.

■ Other protection circuit

AC detection circuit

This is a protection circuit that prevents popping sounds in the Speaker and Headphones output when the AC power cord is connected or disconnected.


D AF Assy
R3641
10k
RYF
to SP Relay Circuit
R3642
1k
RYR
to SP Relay Circuit
V+5D
D3635
DAN202K
V+B
R3631
3.3k
R3632
3.3k
R3633
10k
D3634
Q3631
Q3632
E2
B2
C2
Q3636
C
B
E
Q3633
Ⓑ
D3631
MTZJ5.1A
R3634
4.7k
C3631
2.2/50
R3635
3.3k
ACB
D3622
D3633
Ⓐ
D3636
Q3635
to HP MUTE

- The voltage at Point Ⓐ is a DC voltage which has been generated by half-wave rectification on the minus side of the AC power.
- The voltage at Point Ⓑ is approx. 5 V.

- The base voltage at Q3631 is a voltage between Points Ⓐ and Ⓑ divided by R3633 and R3634. As this voltage is negative (-) in Normal mode, Q3631 is off.

  When the AC power cord is disconnected and there is no AC power input, the base voltage at Q3631 becomes +0.6 V or more, and Q3631 is turned on. Then, the operations below follow.

(1) SP Relay

Q3632 (E2, C2, B2), Q3633, and Q3636 (E, C, B) are turned on, the line to activate the SP relay becomes low level, and the SP Relay is turned off.

(2) HP MUTE

Q3635 is turned on, and the MUTE circuit for HP is turned on.

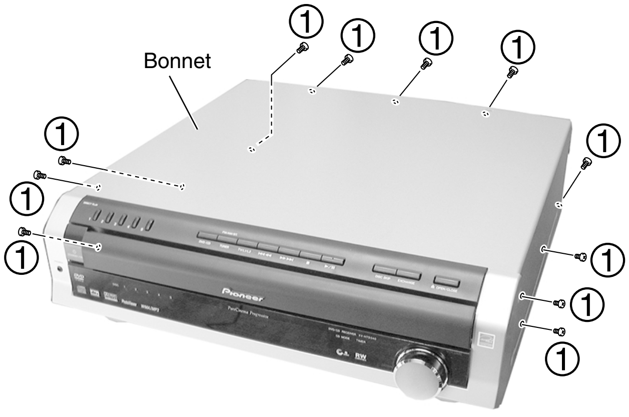
7.1.13 DISASSEMBLY

DIAGNOSIS OF PCBs

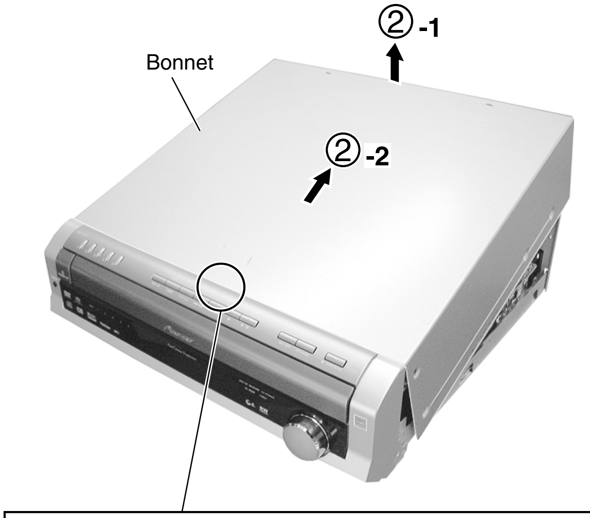
Note: For performing the diagnosis shown below, the following jig cables for service are required:
- GGD1160
- GGD1228
- GGD1315 (×2)

1 Bonnet and Tray Cap

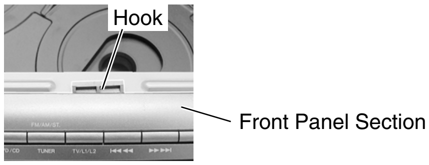
① Remove the eleven screws.


Bonnet
①
①
①
①
①
①
①
①
①
①
①

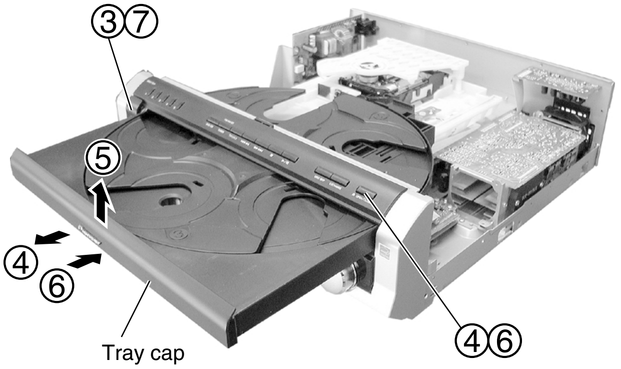
② Remove the bonnet.


②-1
Bonnet
②-2

Caution :
Remove the bonnet carefully because the hook of Front Panel Section may be damaged.
And be careful not to damage when installs it afain.


Hook
Front Panel Section

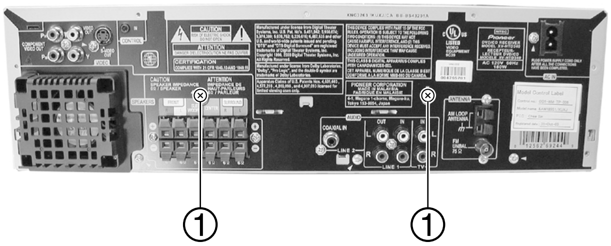
③ Press the ⏻ STANDBY/ON button to turn on the power.
④ Press the ⏏ OPEN/CLOSE button to open the tray.
⑤ Remove the tray cap.
⑥ Press the ⏏ OPEN/CLOSE button to close the tray.
⑦ Press the ⏻ STANDBY/ON button to turn off the power.


③⑦
⑤
④
⑥
Tray cap
④⑥

● How to open the Tray when the power cannot be on

① Remove the two screws.

● Rear view



② Create a little gap between the main unit and the Table Mechanism Section by holding and pulling up the rear side of the Table Mechanism Section by hand.

③ Insert your hand through the gap below the Table Mechanism Section.

Note : When working, be careful not to injure yourself with a burr, etc..

④ Turn the gear pulley counterclockwise as viewed from the top.

⑤ If the tray pops out a little, fully pull it out by a hand.

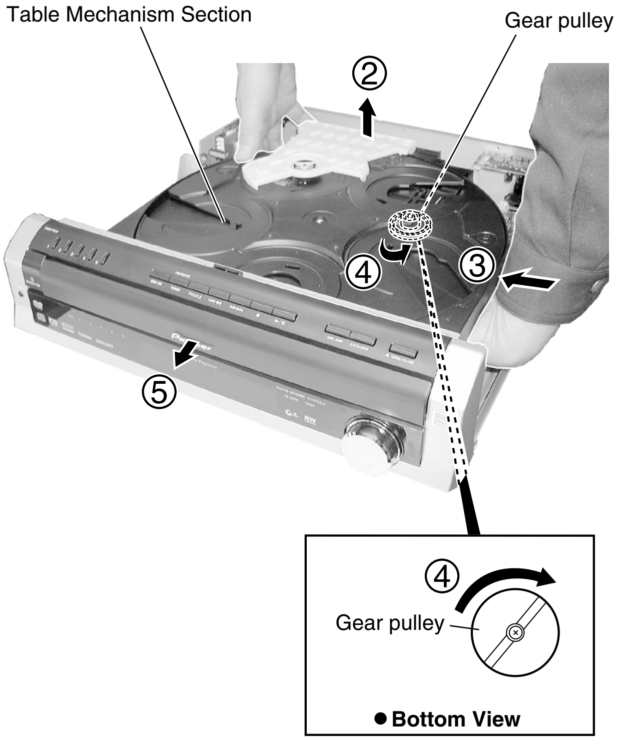


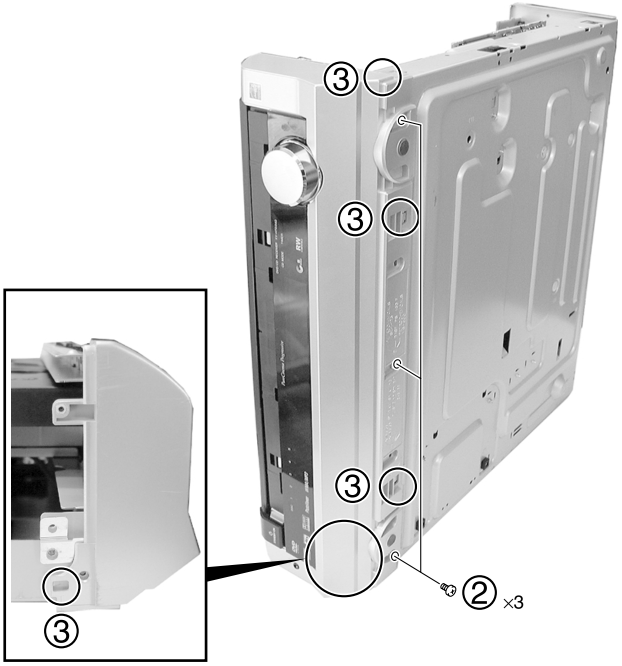
Table Mechanism Section
Gear pulley
②
④
③
⑤
④
Gear pulley
● Bottom View

2 Front Panel Section

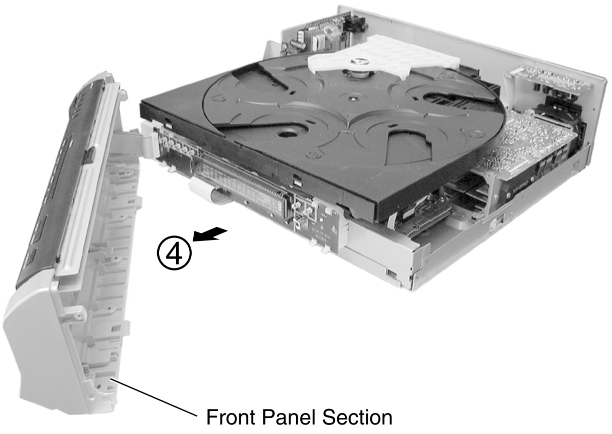
① Remove the bonnet and tray cap. (See Step 1.)

② Remove the three screws.

④ Unhook the four hooks.



④ Remove the Front Panel Section.

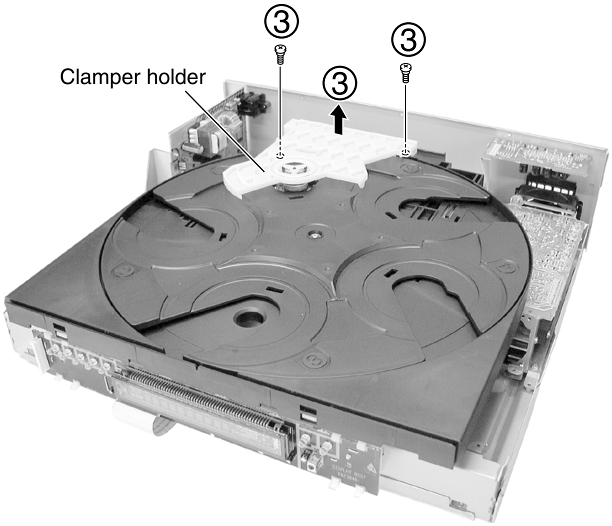

④
Front Panel Section

3 DVDM Assy

① Remove the bonnet and tray cap. (See Step 1.)

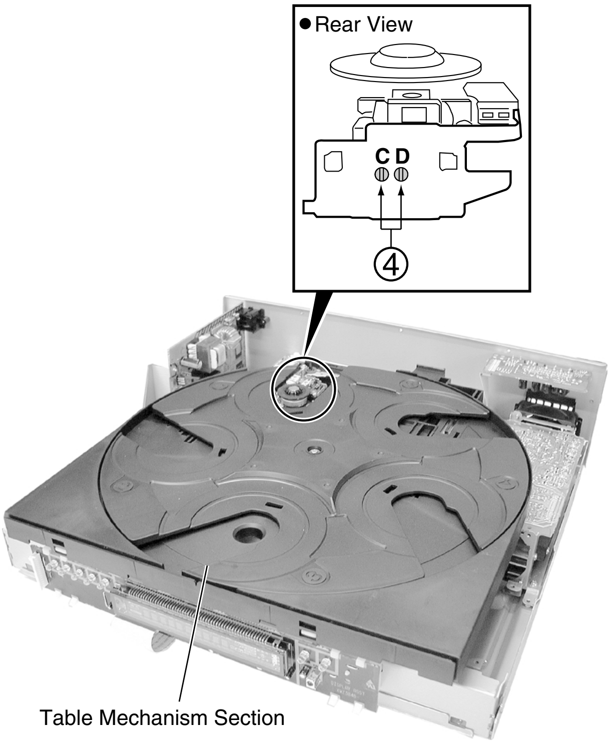
② Remove the Front Panel Section. (See Step 2.)

③ Remove the clamper holder by removing the two screws.

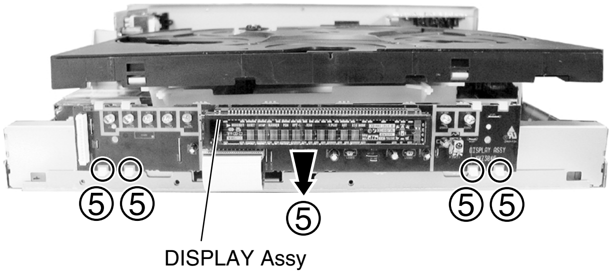

③
③
③
Clamper holder

④ Short-circuit two points of C and D by soldering.

Note : After replacement, connect the flexible cable, then remove the soldered joint (open).


● Rear View
C D
④
Table Mechanism Section

⑤ Remove the DISPLAY Assy by unhooking at the four points.


⑤ ⑤
⑤
⑤ ⑤
DISPLAY Assy

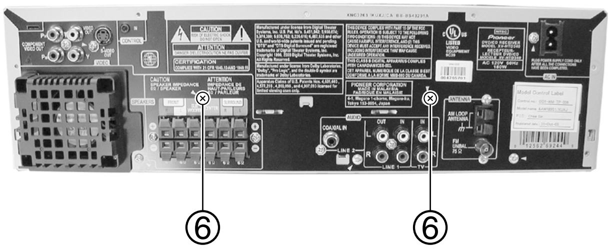
⑥ Remove the four screws.

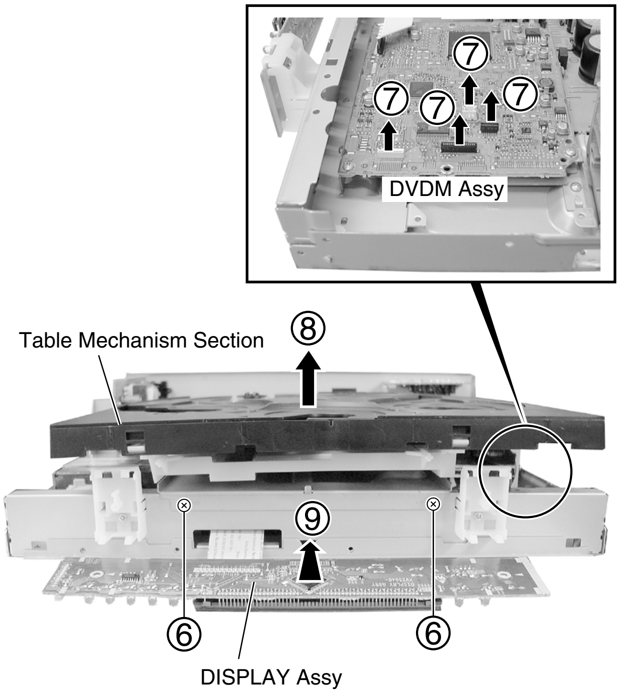
⑦ Disconnect the three flexible cables and the one connector.

⑧ Remove the Table Mechanism Section.

⑨ Reattach the DISPLAY Assy.

● **Rear view**



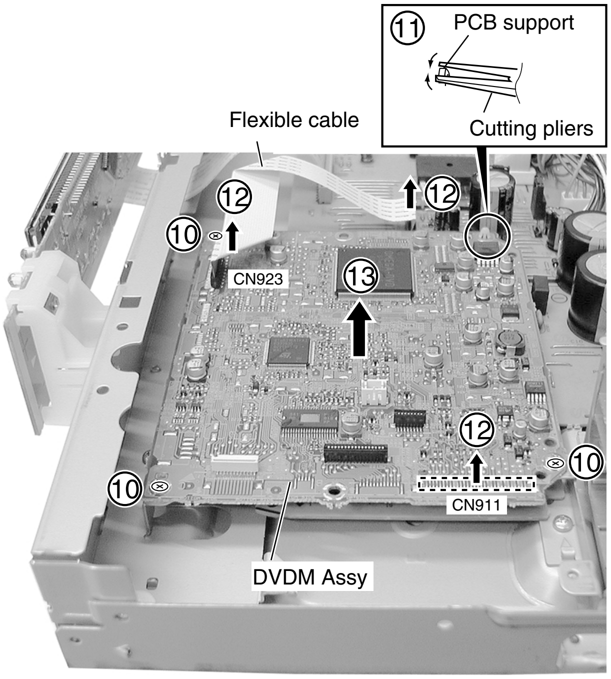

⑦
⑦
⑦
⑦
DVDM Assy
Table Mechanism Section
⑧
⑨
⑥
⑥
DISPLAY Assy

⑩ Remove the three screws.

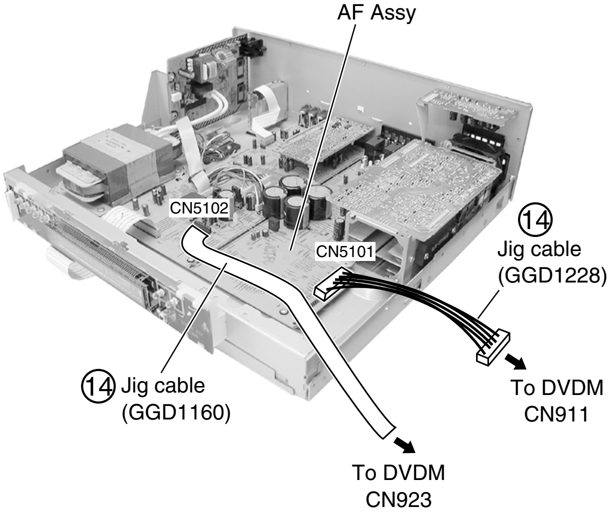
⑪ Remove the PCB support.

⑫ Remove the flexible cable and disconnect the connector.

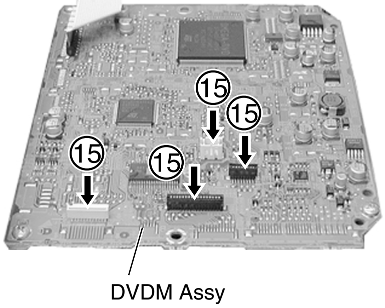
⑬ Remove the DVDM Assy.


⑪
PCB support
Cutting pliers
Flexible cable
⑫
⑩
CN923
⑫
⑬
⑫
⑩
⑩
CN911
DVDM Assy

⑭ Connect the two jig cables.


AF Assy
CN5102
CN5101
⑭
Jig cable
(GGD1228)
To DVDM
CN911
⑭ Jig cable
(GGD1160)
To DVDM
CN923

⑮ Reattach the three flexible cables and the one connector from the Table Mechanism Section.


⑮
⑮
⑮
⑮
DVDM Assy

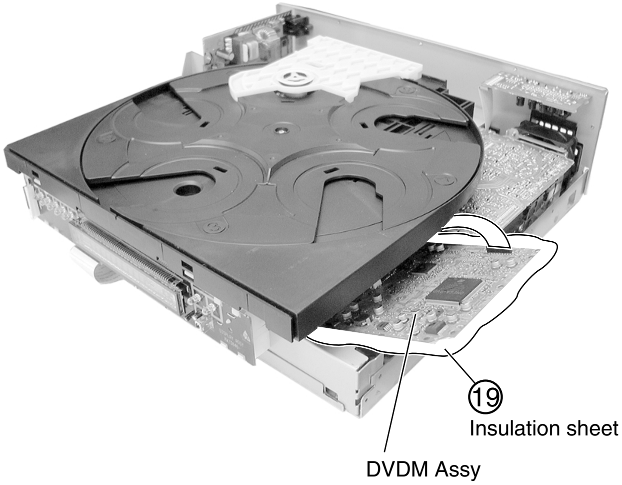
⑯ Reattach the Table Mechanism Section.
(See Steps ⑨ to ⑤.)

⑰ Remove the soldered joint pickup short point.
(See Step ④.)

⑱ Reattach the clamper holder by tighten the two screws.
(See Step ③.)

⑲ Insert the insulation sheet between the DVDM Assy and the chassis.

⑳ Arrange the cables as shown in the photo below.

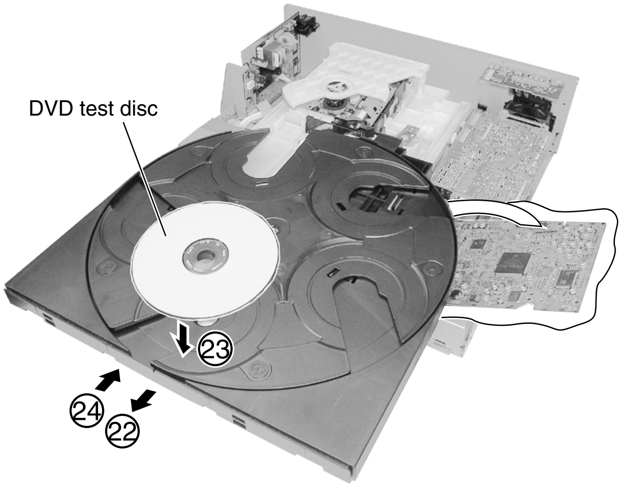

⑲
Insulation sheet
DVDM Assy

㉑ Press the ⏻ STANDBY/ON button to turn on the power.

㉒ Press the ▲ OPEN/CLOSE button to open the tray.

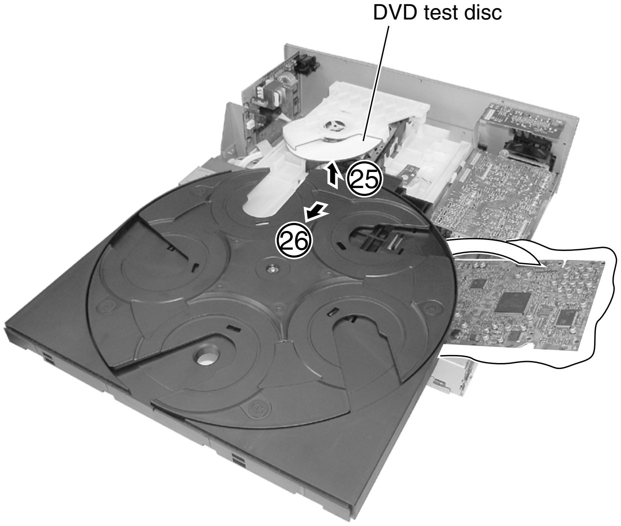
㉓ Set the DVD test disc.

㉔ Press the ▲ OPEN/CLOSE button to close the tray.


DVD test disc
㉓
㉔
㉒

㉕ Press the ▶/❚❚ PLAY/PAUSE button.
(DVD test disc is clamped.)

㉖ Press the ▲ OPEN/CLOSE button.
(Tray is opened.)


DVD test disc
㉕
㉖

Diagnosis

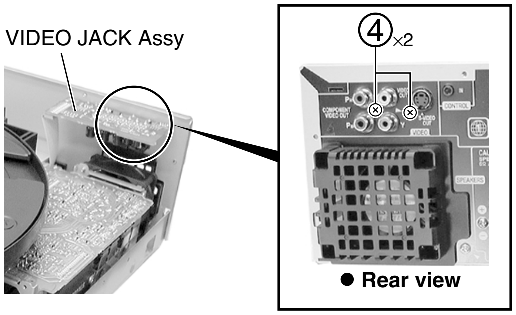
4 AMP Module Section

① Remove the bonnet and tray cap. (See Step 1.)

② Remove the Front Panel Section. (See Step 2.)

③ Remove the Table Mechanism Section. (See Step 3.)
(Do not disconnect the flexible cables that connects to the DVDM Assy.)

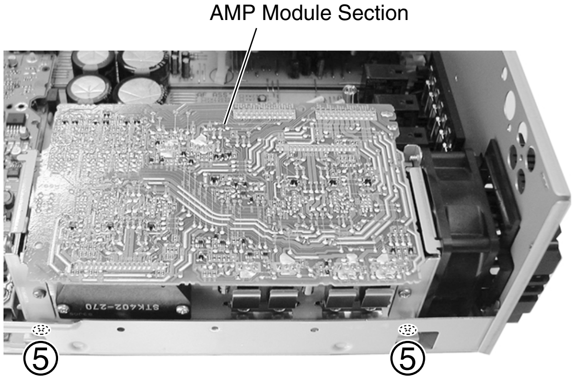
④ Remove the VIDEO JACK Assy by removing the two screws.

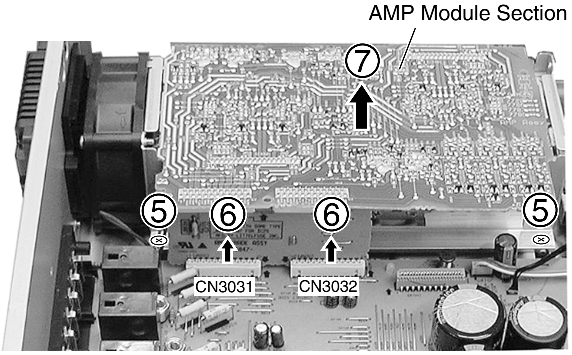

VIDEO JACK Assy
④×2
● Rear view

⑤ Remove the four screws.

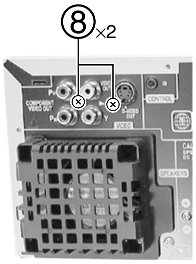
⑥ Disconnect the two connectors.

⑦ Remove the AMP Module Section.


AMP Module Section
⑤
⑤


AMP Module Section
⑦
⑤
⑥
⑥
⑤
CN3031
CN3032

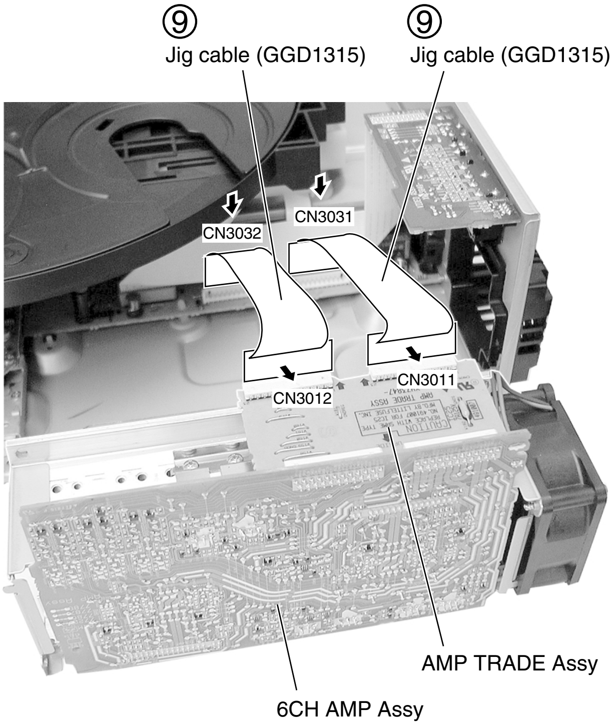
⑧ Reattach the VIDEO JACK Assy by tighten the two screws.



● **Rear view**

⑨ Connect the two jig cables.

⑩ Arrange the cables as shown in the photo below.


⑨
Jig cable (GGD1315)
⑨
Jig cable (GGD1315)
CN3032
CN3031
CN3012
CN3011
AMP TRADE Assy
6CH AMP Assy

Diagnosis

5 AF Assy

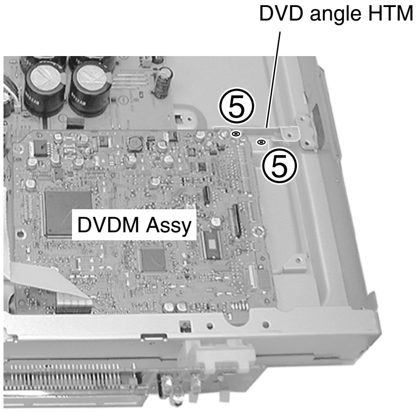
① Remove the bonnet and tray cap. (See Step 1.)

② Remove the Front Panel Section. (See Step 2.)

③ Remove the Table Mechanism Section. (See Step 3.)

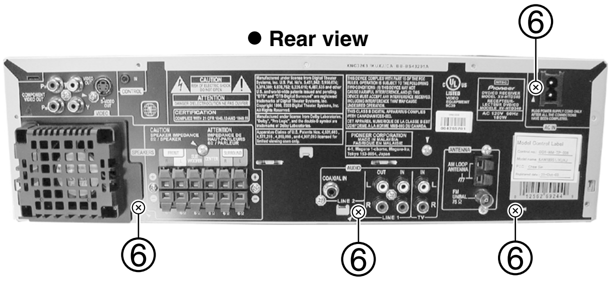
④ Remove the AMP Module Section. (See Step 4.)

⑤ Remove the DVD angle HTM by removing the two screws.


DVD angle HTM
⑤
⑤
DVDM Assy

⑥ Remove the four screws.

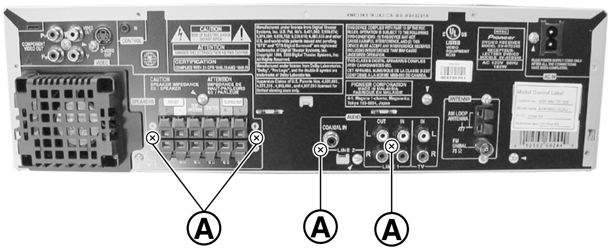
● **Rear view**



⚠ Note on handling the rear panel

During diagnosis, be sure NOT to remove the four screws marked Ⓐ in the above photo. This unit will damage if the Audio Output connectors and the Speaker Output connectors of the AF Assy are separated from the rear panel, because that would damage the ICs in circuit.

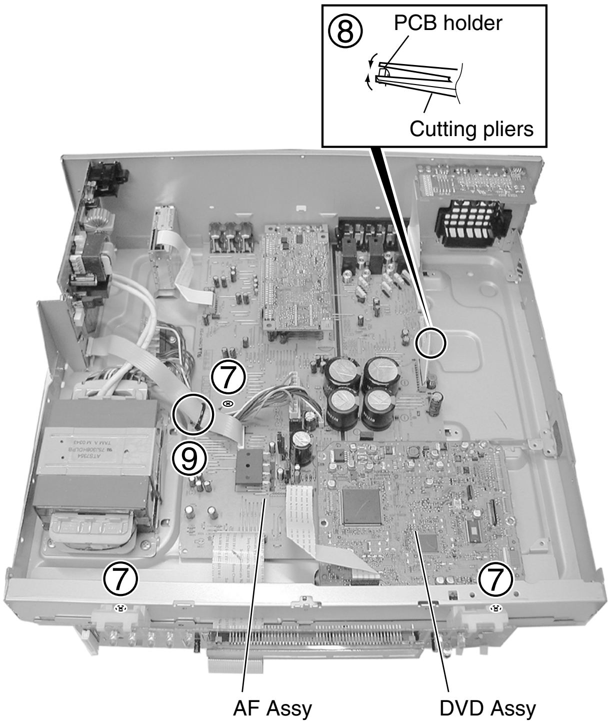
● **Rear view**



⑦ Remove the three screws.

⑧ Remove the one PCB holder.

⑨ Loosen the cord holder.


⑧
PCB holder
Cutting pliers
⑦
⑨
⑦
⑦
AF Assy
DVD Assy

⑩ Reattach the Table Mechanism Section. (See Step 3.)
(Be sure to secure it in place with screws.)

⑪ Turn the AF Assy with the Table Mechanism Section attached to the upright position.

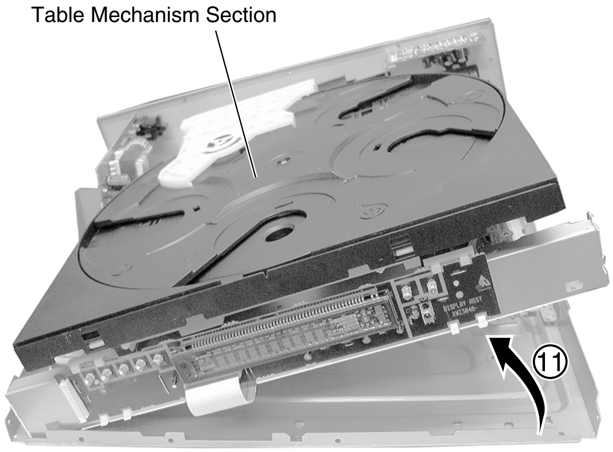
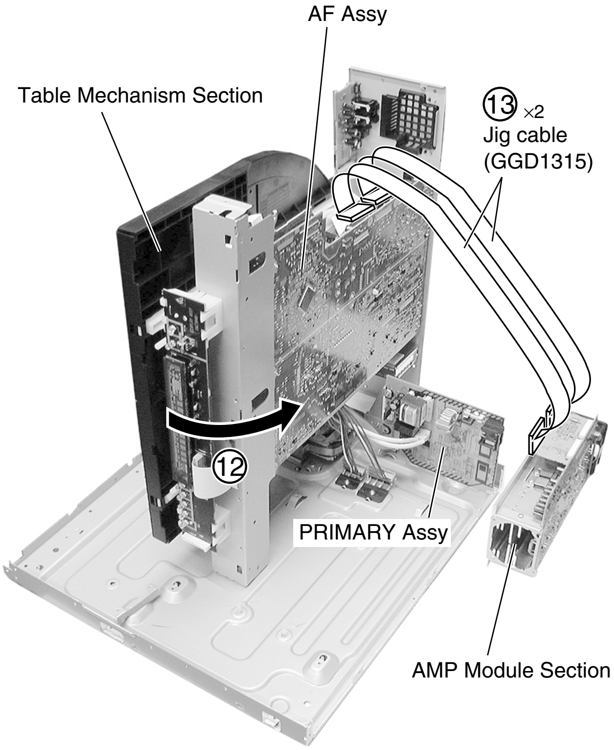


Table Mechanism Section
⑪

⑫ Arrange the cables as shown in the photo below.

⑬ Connect the AF Assy with the AMP Module Section using the two jig cables.


AF Assy
Table Mechanism Section
⑬ ×2
Jig cable
(GGD1315)
⑫
PRIMARY Assy
AMP Module Section

Diagnosis

TABLE MECHANISM SECTION

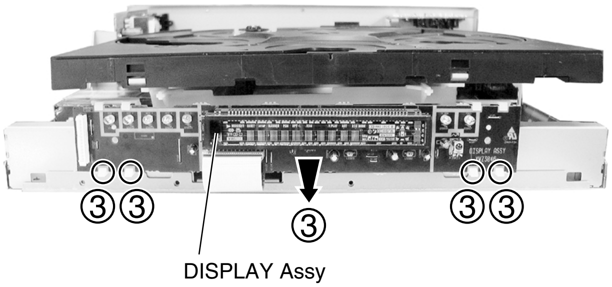
Traverse Mecha. Assy-S

Note : Be sure to set the Traverse Mechanism to Unclamp (down) mode.

① Remove the bonnet and tray cap. (See Step 1.)

② Remove the Front Panel Section. (See Step 2.)

③ Remove the DISPLAY Assy by unhooking at the four points.


③③
③
③③
DISPLAY Assy

④ Remove the four screws.

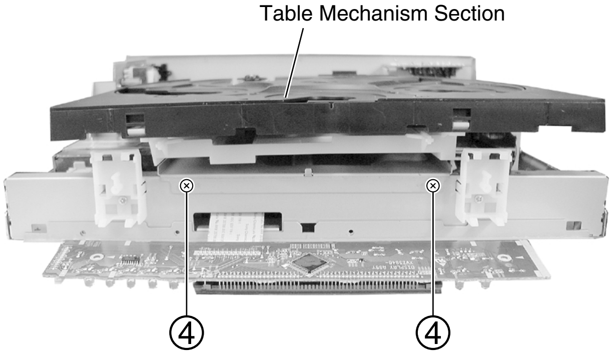
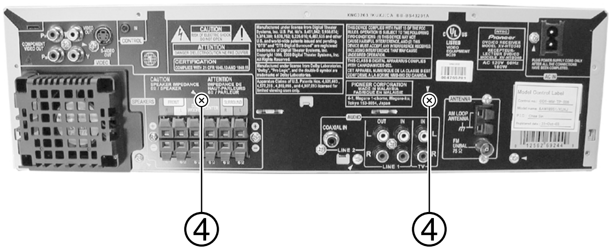
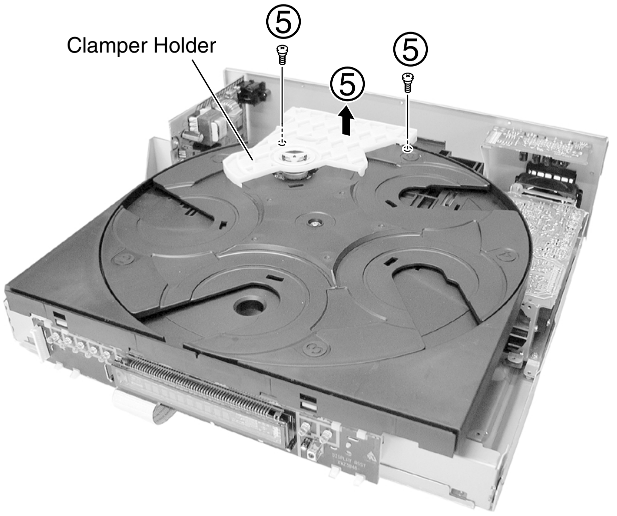


Table Mechanism Section
④
④

● **Rear view**



⑤ Remove the clamper holder by removing the two screws.

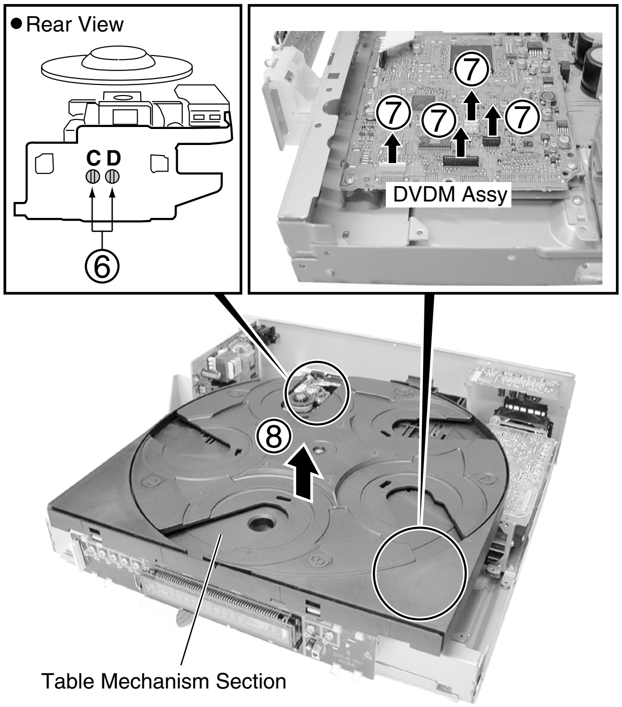

Clamper Holder
⑤
⑤
⑤

⑥ Short-circuit two points of C and D by soldering.

Note : After replacement, connect the flexible cable, then remove the soldered joint (open).

⑦ Disconnect the three flexible cables and the one connector.

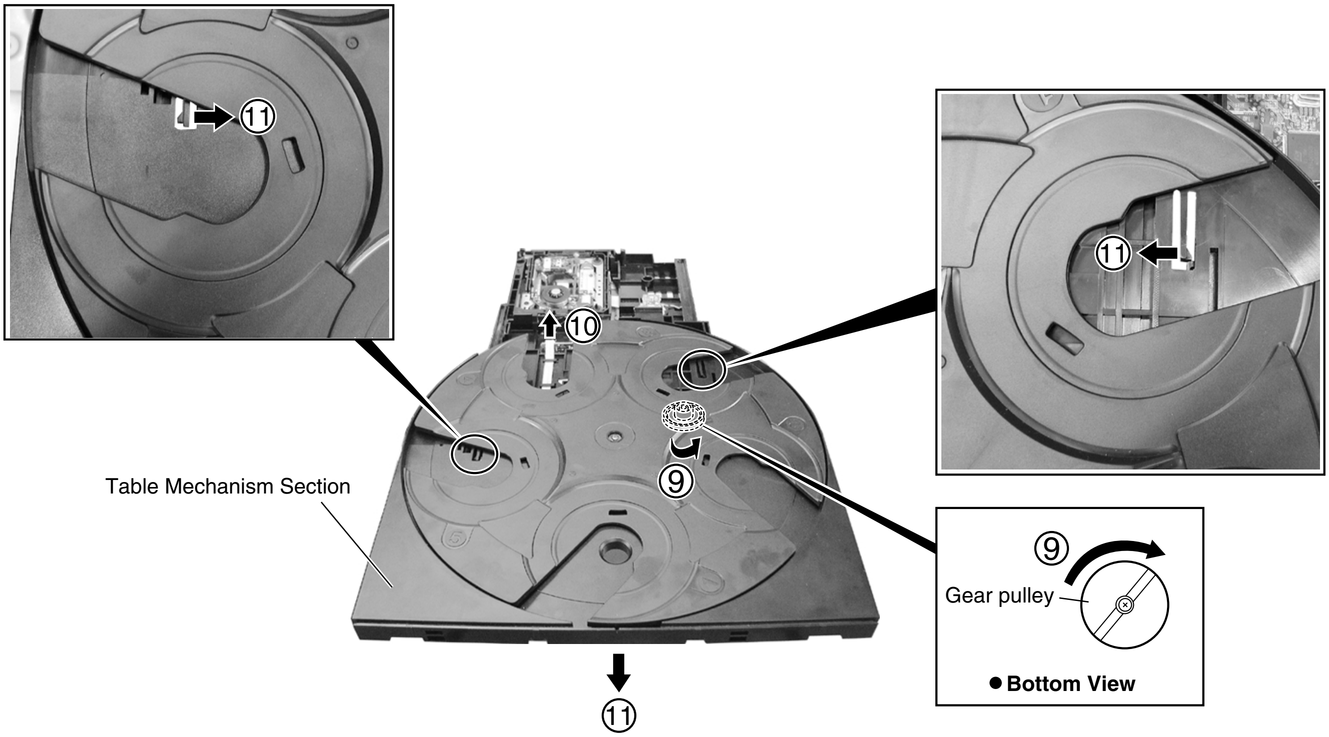
⑧ Remove the Table Mechanism Section.


● Rear View
C D
⑥
⑦
⑦
⑦
⑦
DVDM Assy
⑧
Table Mechanism Section

⑨ Open the tray by turning the gear pulley counterclockwise viewed from the top.
(After the tray pops out a little, fully pull it out by hand.)

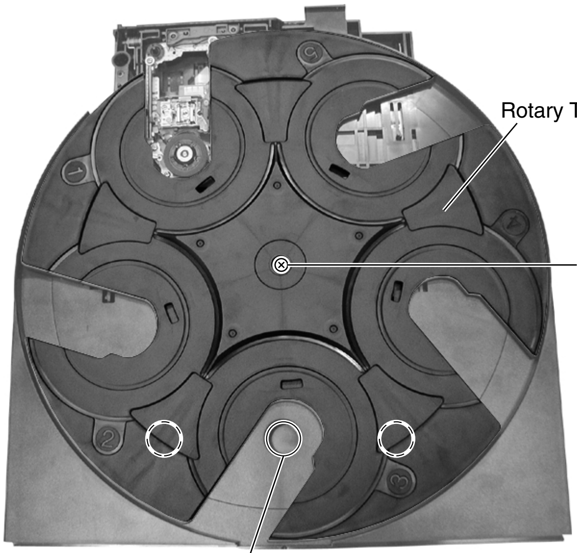
⑩ Disconnect the flexible cable.

⑪ Remove the Table Mechanism Section by unhooking at the two points.



● If the Table Mechanism Section cannot be removed

Displacement of the rotary tray may be the cause. (If this is the case, in Step ⑪ above, the two hooks cannot be seen, because they are covered by the rotary tray.)
In this case, set the rotary tray in the correct position, following the steps below.



① Remove.

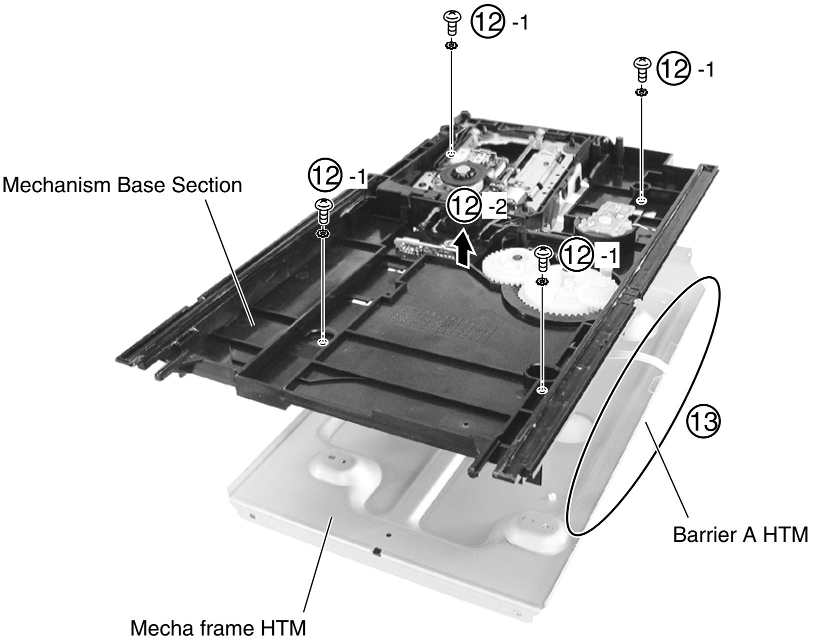
③ Tighten.

② Adjust the position of the rotary tray so that the center hole can be seen.

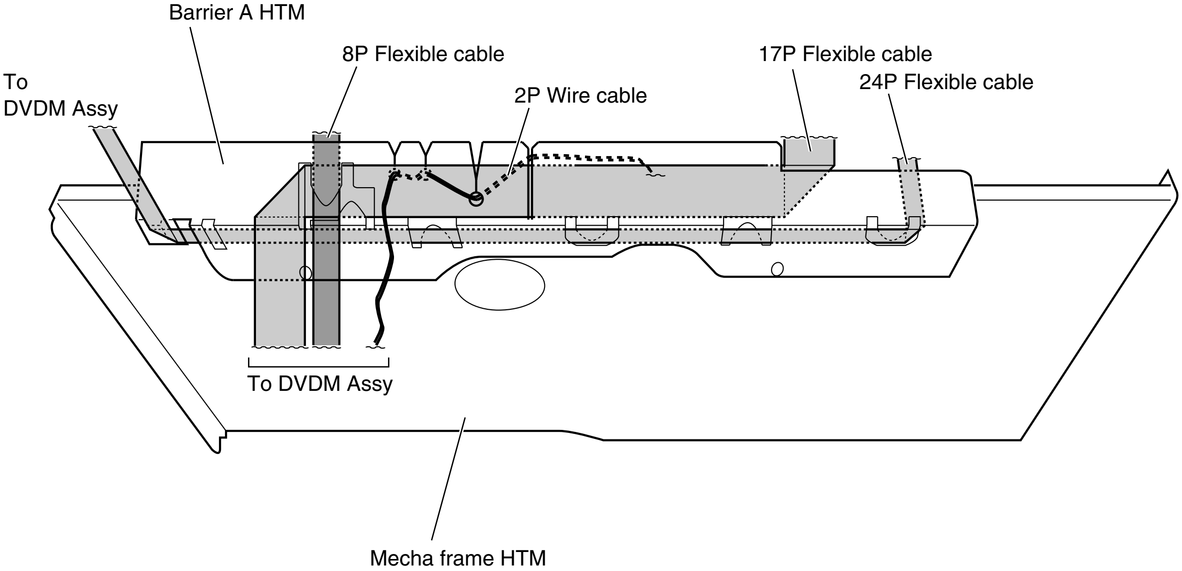
Note:
It is not necessary to set the Disc No. of the rotary tray, because the Automatic Disc No. Detection system will function.

⑫ Remove the Mechanism Base Section by removing the four screws.

⑬ Remove the flexible cables from the barrier A HTM.


⑫ -1
⑫ -1
Mechanism Base Section
⑫ -1
⑫ -2
⑫ -1
⑬
Barrier A HTM
Mecha frame HTM

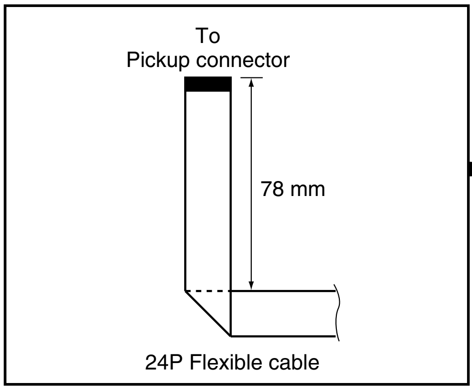
● Arrangement of the flexible cables when reassembling

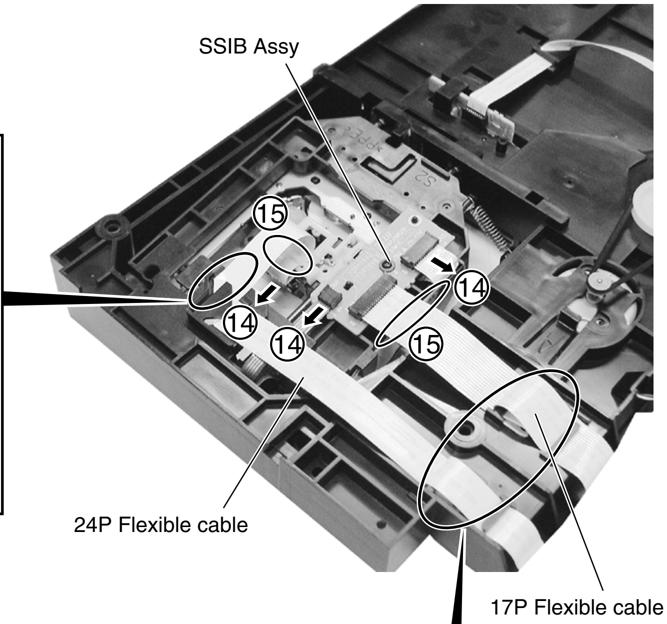

Barrier A HTM
8P Flexible cable
17P Flexible cable
24P Flexible cable
To DVDM Assy
2P Wire cable
To DVDM Assy
Mecha frame HTM

⑭ Remove the three flexible cables.

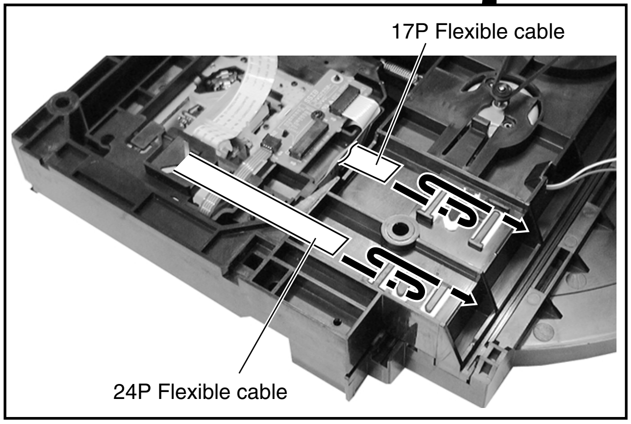
⑮ Set the arranged flexible cables out of the way.

● Styling the Pickup flexible cable


To
Pickup connector
78 mm
24P Flexible cable

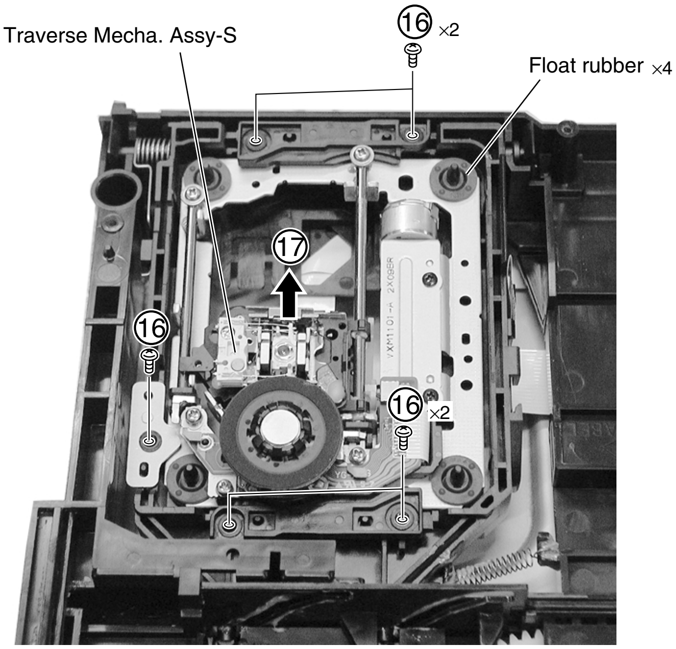

SSIB Assy
⑮
⑭
⑭
⑭
⑭
⑮
24P Flexible cable
17P Flexible cable

● Styling the flexible cable installation

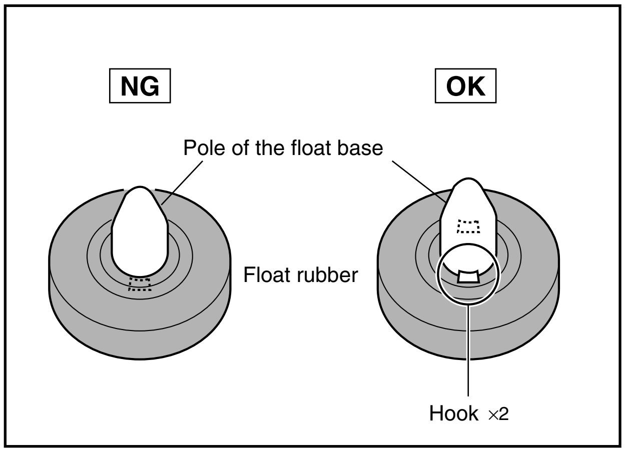

17P Flexible cable
24P Flexible cable

⑯ Remove the five screws.

⑰ Remove the Traverse Mecha. Assy-S.

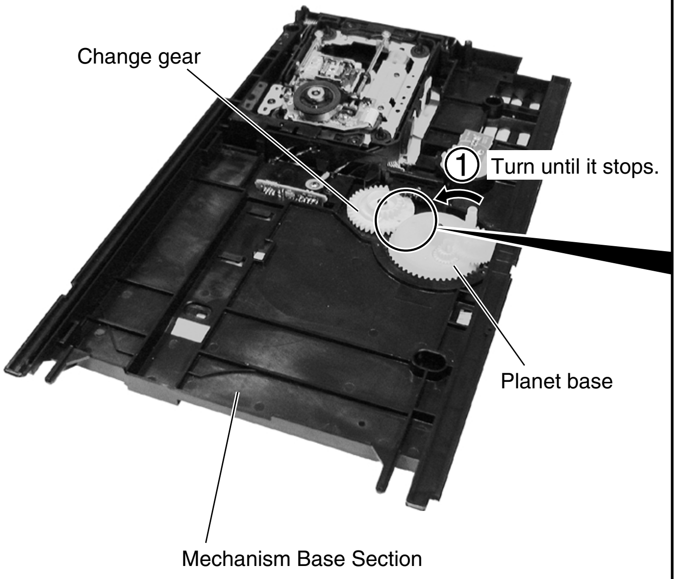

Traverse Mecha. Assy-S
⑯ ×2
Float rubber ×4
⑰
⑯
⑯ ×2

● Note on the Float rubber Installation

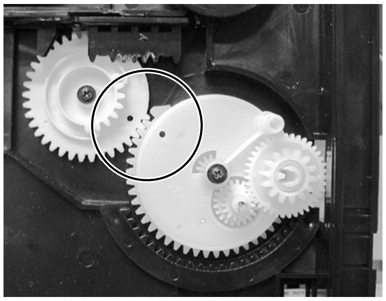

NG
OK
Pole of the float base
Float rubber
Hook ×2

Procedures and Notes on Assembling the Table Mechanism Section

① Turn the planet base as shown below.

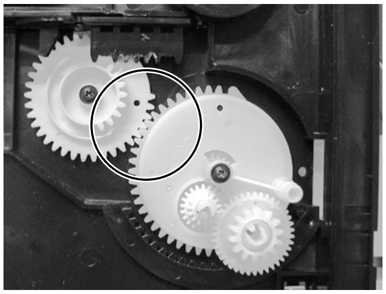

Change gear
① Turn until it stops.
Planet base
Mechanism Base Section

OK



If the first teeth (marked by dots) of the gears engage, it is OK.

NG

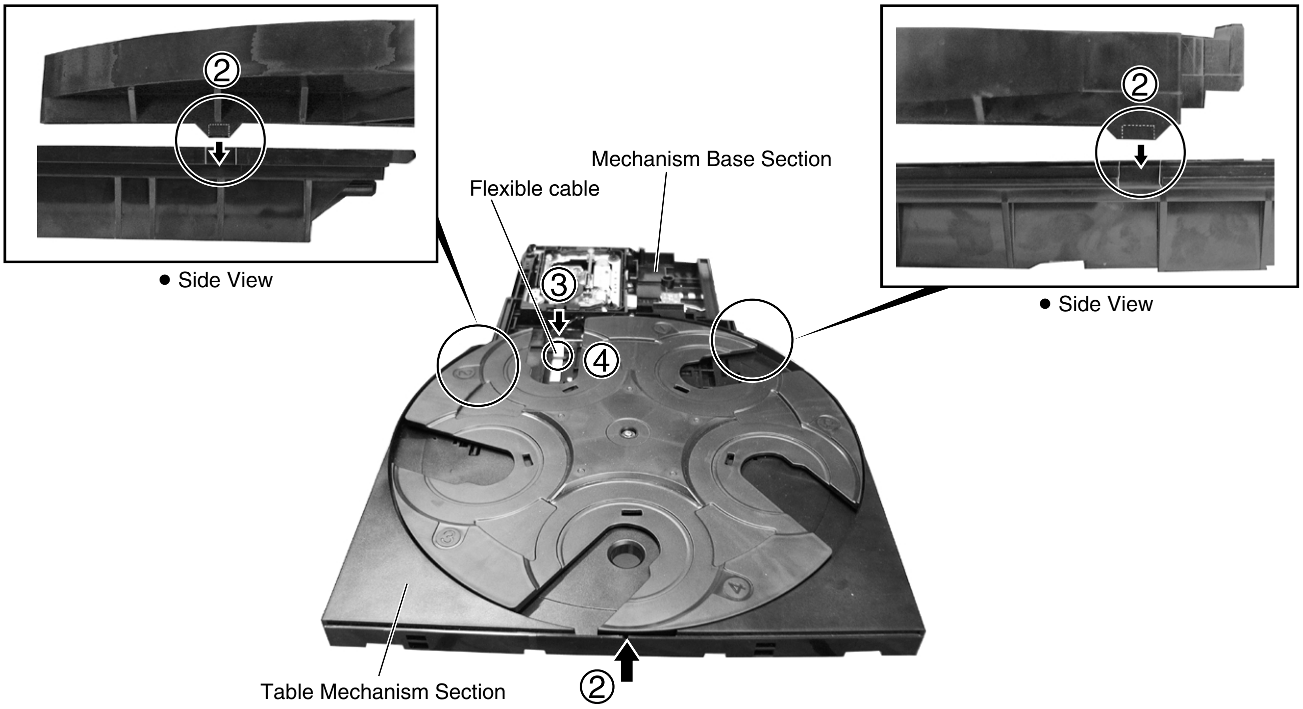


If the engaged teeth of the gears are displaced by two teeth or more, a strange sound is generated, and a problem occurs.

② Mount the Table Mechanism Section on the Mechanism Base Section.

③ Connect the flexible cable.

④ Bring an extra flexible cable close to the front side.


②
● Side View
Mechanism Base Section
Flexible cable
③
④
②
● Side View
Table Mechanism Section
②

● How to repair when the Table Mechanism Section does not function

● **Bottom View**

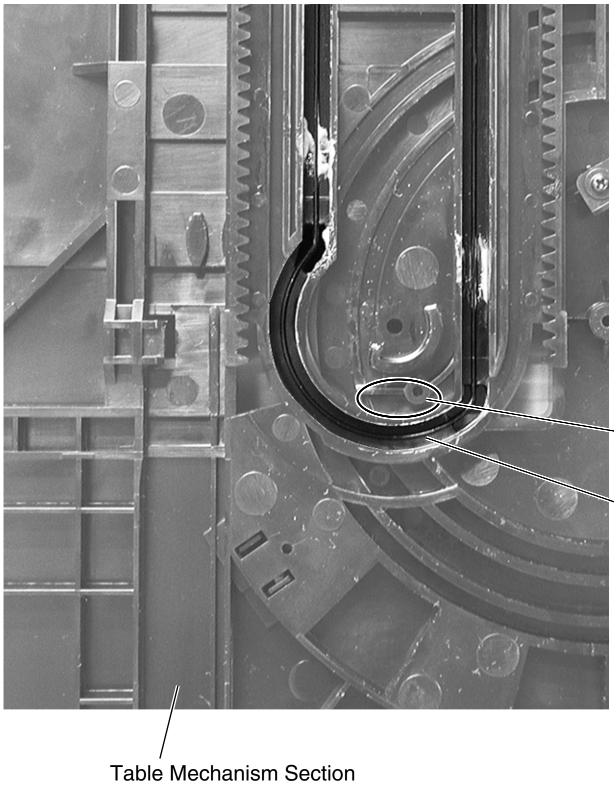


Table Mechanism Section

If the boss is set in this position, the unit does not operate correctly.

If the boss is set in the cam groove, the unit operates correctly.

Procedures:

1. Flex the Table Mechanism Section and the Mechanism Base Section slightly in opposite directions by pulling up on the Table Mechanism Section and pressing down on the Mechanism Base Section.
   When pressing down on the Mechanism Base Section, grip it near the planet base.
2. Flex the Table Mechanism Section until the boss of the planet base goes over the wall of the cam (by approx. 5 mm).
3. Set the boss of the planet base into the cam groove of the Table Mechanism Section.

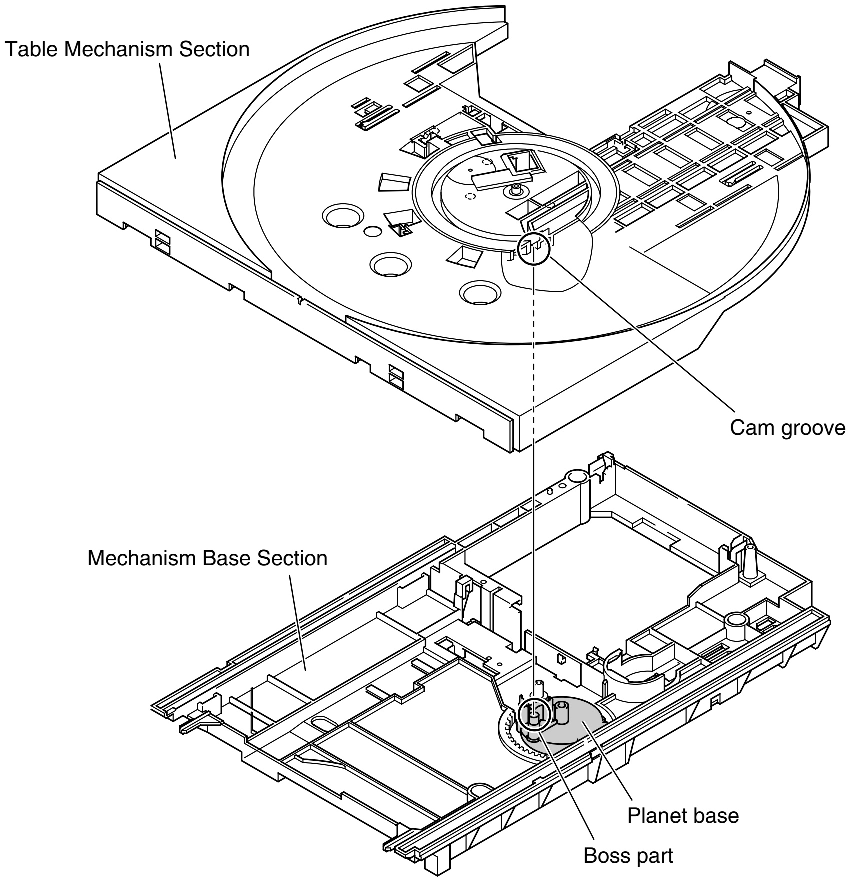
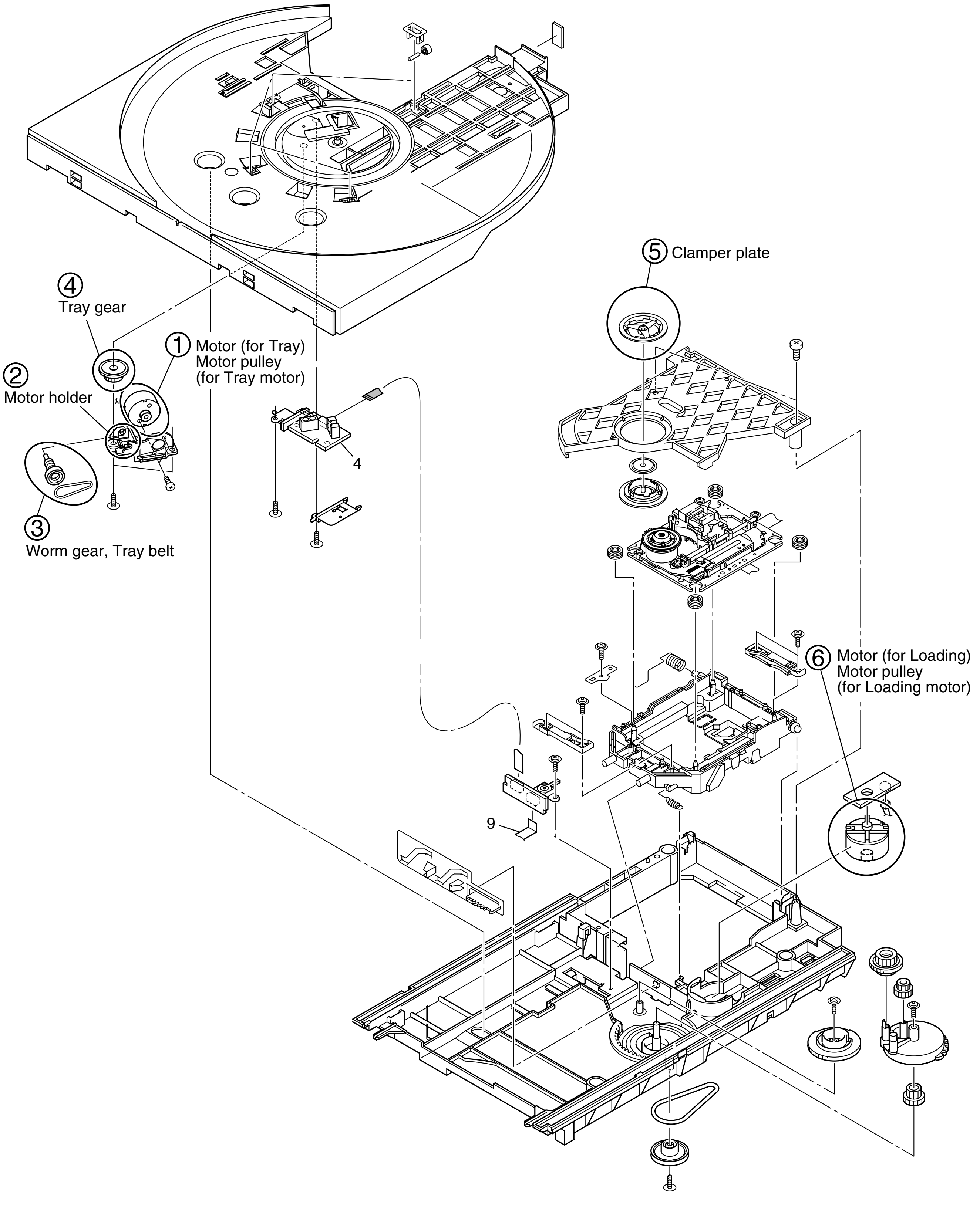


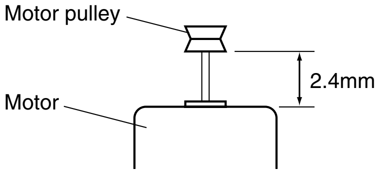
Table Mechanism Section
Cam groove
Mechanism Base Section
Planet base
Boss part

● Notes on Assembling the Mechanism Section

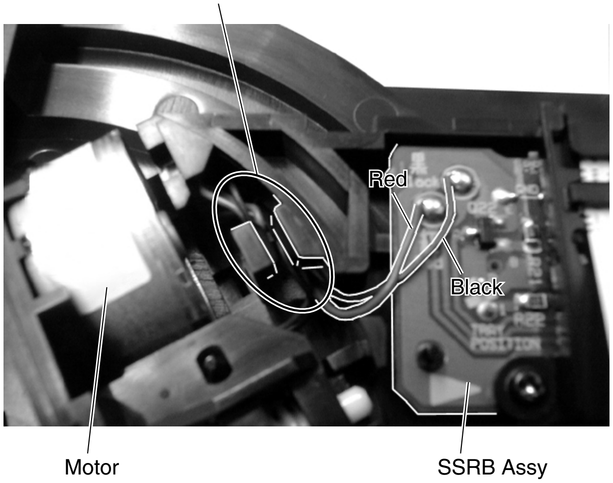

④
Tray gear
② Motor holder
① Motor (for Tray)
Motor pulley
(for Tray motor)
③
Worm gear, Tray belt
4
⑤ Clamper plate
⑥ Motor (for Loading)
Motor pulley
(for Loading motor)
9

① Motor (for Tray), Motor Pulley (for Tray Motor)

Adjust the height of the motor pulley to 2.4mm.


Motor pulley
2.4mm
Motor

Tuck the lead wires under the hook of the motor holder so that they do not disturb the tray's opening or closing.

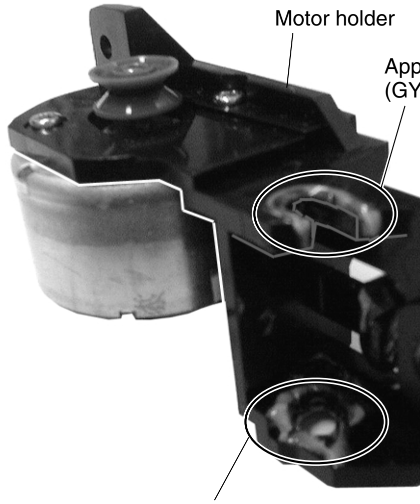

Red
Black
Motor
SSRB Assy

② Motor Holder

Apply lubricating oil (GYA1001) to the holder part.

Motor holder

Apply lubricating oil (GYA1001).

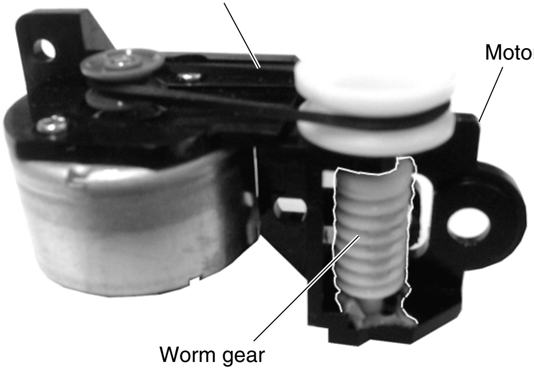


Apply lubricating oil (GYA1001).

③ Worm Gear and Tray Belt

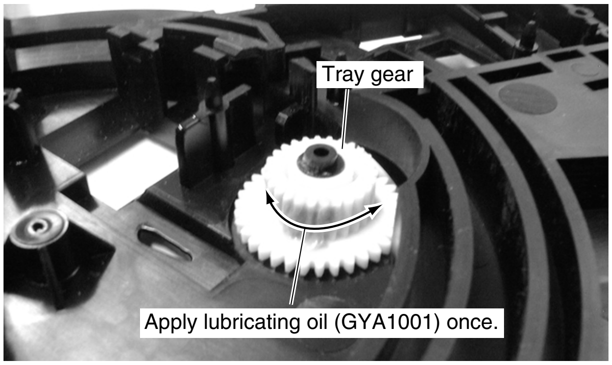
Tray belt
Be carefull not to damage it when exchanging.

Motor holder



Worm gear
Apply lubricating oil (GYA1001) once.

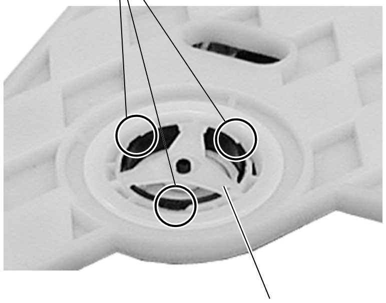
④ Tray Gear



Apply lubricating oil (GYA1001) once.

⑤ Clamper Plate

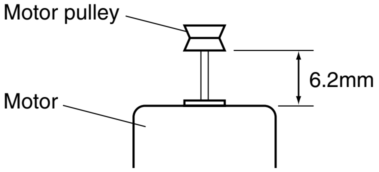
Apply adhesive on the inside of hooks.
(Prevention of dripping)



Clamper plate

⑥ Motor (for Loading), Motor Pulley (for Loading Motor)

Adjust the height of the motor pulley to 6.2mm.


Motor pulley
6.2mm
Motor

7.2 PARTS

7.2.1 IC

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

• List of IC

PDC113A, PT6302LQ-003

■ PDC113A (AF ASSY : IC5501)

- System Control Microcomputer

● Pin Functions

No.	Mark	Pin Name	I/O	Function
1	PA3/WR#	DVDON/OFF	O	Control power supply for DVD module
2	PA4/RD#	HPDET	I	Detection of the headphone insertion
3	PA5/RS	NC	O	NC
4	P70 / INT0 / T0LCP / AN8	ACPULSE	I	AC PULSE input (Interruption)
5	P71 / INT1 / T0HCP / AN9	NC	O	NC
6	P72 / INT2 / T0IN	NC	O	NC
7	P73 / INT3 / T0IN	REMOCON	I	REMOCON signal input (Interruption)
8	RES#	XRESET	I	µ-com reset input
9	XT1 / AN10	XT1	–	(When this port is not used, please connect VDD)
10	XT2 / AN11	XT2	–	(When this port is not used, please set open)
11	VSS1	VSS1	–	
12	CF1	CF1	–	
13	CF2	CF2	–	
14	VDD1	VDD1	–	
15	P80 / AN0	SIMUKE	I	Destination distinction input
16	P81 / AN1	MODEL	I	model distinction input
17	P82 / AN2	VDET	I	DVD 3.3V detection input
18	P83 / AN3	KEY1	I	Key1 input
19	P84 / AN4	KEY2	I	Key2 input
20	P85 / AN5	VOLJOG	I	Volume JOG Key
21	P86 / AN6	NC	I	NC
22	P87 / AN7	XPROTECT	O	Protection and Fan Error detection input
23	P10/SO0	SDATA	O	System bus data output (AMP side output)
24	P11 / SI0 / SB0	MDATA	I	System bus data input (AMP side input)
25	P12 / SCK0	SCLK	I	System bus clock input
26	P13 / SO1	SR+Tx	O	UART Tx of SR+ function
27	P14 / SI1 / SB1	SR+Rx	I	UART Rx of SR+ function
28	P15 / SCK1	NC	O	NC
29	P16/T1PWML	SYSCS2	O	Chip select 2 for system bus
30	P17/T1PWMH/BUZ	SYSCS1	O	Chip select 1 for system bus
31	PE0	XHPMUTE	O	HP MUTE ON/OFF
32	PE1	XRECMUTE	O	REC OUTPUT MUTE ON/OFF
33	PE2	XMUTEC	O	Cch MUTE ON/OFF
34	PE3	RYR	O	REAR RELAY ON/OFF
35	PE4	RYFSC	O	FRONT/SW/CENTER RELAY ON/OFF
36	PE5	(3/5 CONVERT)	O	3/5V convert control for SR+ function
37	PE6	TIMERLED	O	Control TIMER LED
38	PE7	(LEVELSHIFT)	O	VOL 0 - 5 : H
39	VSS4	VSS4		
40	VDD4	VDD4		

No.	Mark	Pin Name	I/O	Function
41	PF0	ATT10dB	O	Control ATT 10dB
42	PF1	ATT6dB	O	Control ATT 6dB
43	PF2	STEST	I	Set TEST MODE for Service
44	PF3	UTEST	I	Set UNIT CHECK for checker
45	PF4	DTSDMIX	O	Control of gain-up for dts down-mix
46	PF5	SWFMIX	O	Control for subwoofer mix
47	PF6	NC	I	(When this port is not used, please connect GND)
48	PF7	NC	I	(When this port is not used, please connect GND)
49	SI2P0/SO2	DSPDI	O	Data output to DSP(Motorola) and DIR, SIO2 : LSB first
50	SI2P1/SI2/SB2	DSPDO	I	Data input from DSP(Motorola)
51	SI2P2/SCK2	DSPCLK	O	Clock output to DSP(Motorola) and DIR
52	SI2P3/SCK20	TXCE	O	Chip enable for tuner LSI
53	PWM1	NC		NC
54	PWM0	NC		NC
55	VDD2	VDD2		
56	VSS2	VSS2		
57	P00	XFLRST	O	Reset for FL driver
58	P01	FLCS	O	Chip enable for FL driver
59	P02	FLCLK	O	Clock for FL driver
60	P03	FLDAT	O	Data for FL driver(serial data input)
61	P04	TXCLK	O	Clock for tuner LSI
62	P05	TXODATA	O	Data for tuner LSI
63	P06	EXPDATA	O	Data for expander of LED control
64	P07	EXPCLK	O	CLK for expander of LED control
65	P20/INT4/T1IN	NC	O	NC
66	P21/INT4/T1IN	TXIDATA	I	Input data from tuner LSI
67	P22/INT4/T1IN	DVDACK	I	Acknowledgement from DVD MODULE (Interruption)
68	P23/INT4/T1IN	XVMUTE	O	VIDEO MUTE request to DVD MODULE
69	P24/INT5/T1IN	DVDMUTE	I	Request of MUTE from DVD MODULE (Interruption)
70	P25/INT5/T1IN	AUDIOSELA	O	SW for AUDIO In DVD_A/SACD model
71	P26/INT5/T1IN	NC	O	NC
72	P27/INT5/T1IN	XWMUTE	O	WIRELESS MUTE request
73	P30	WSELA	O	WIRELESS OUTPUT SELECT A
74	P31	INPUTSELB	O	AUDIO INPUT SELECT B
75	P32	INPUTSELA	O	AUDIO INPUT SELECT A
76	P33	XTL0	O	Selection X'tal to DIR
77	P34	DIRERR	I	LOCK/UNLOCK from DIR
78	P35	DIRRST	O	Reset to DIR /CODEC
79	P36	DIRCS	O	Chip select to DIR/CODEC
80	PB7/D7	DIRDO	I	Data input from DIR/CODEC

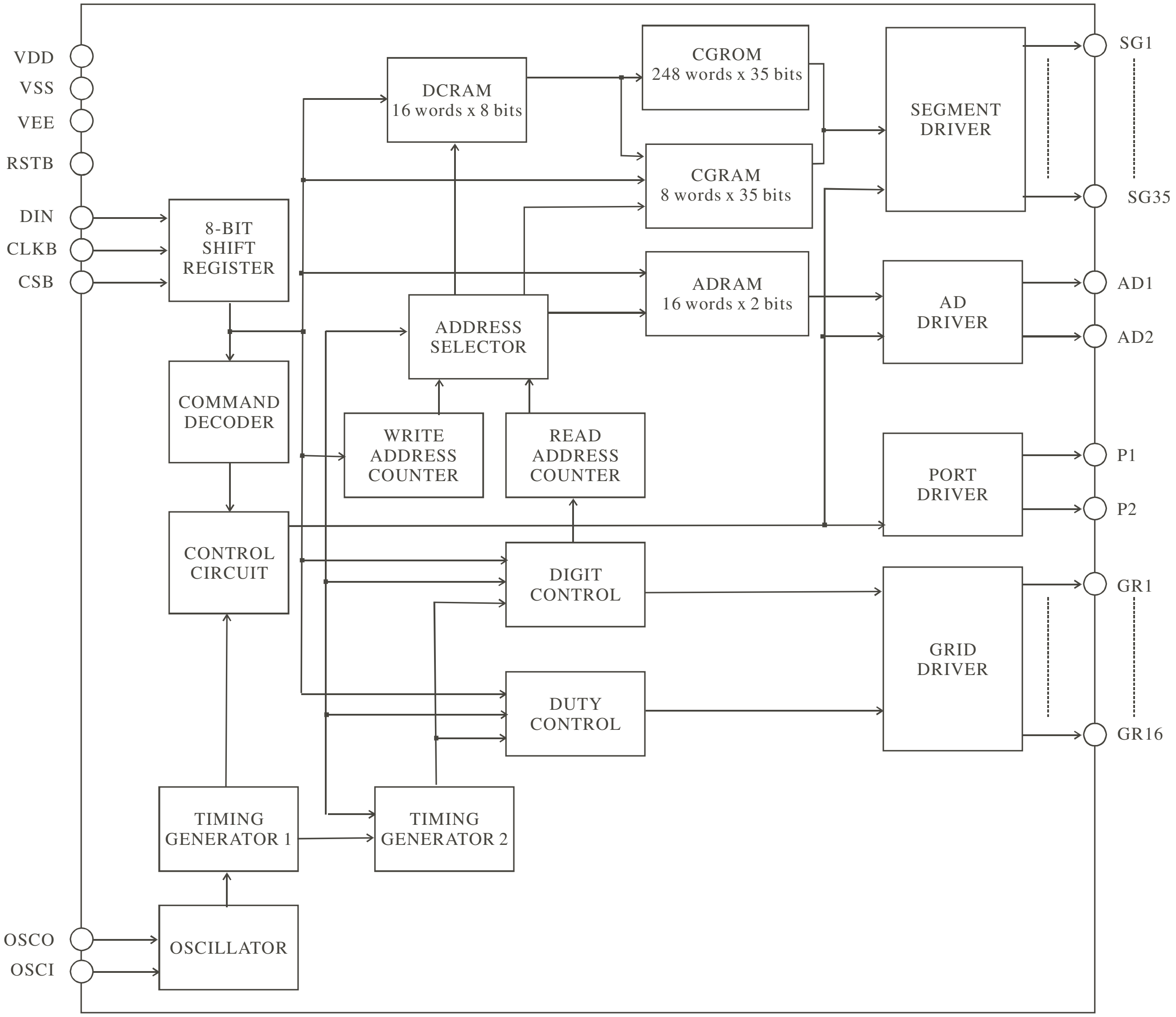
No.	Mark	Pin Name	I/O	Function
81	PB6/D6	DSPMODE	O	MODE selection (ROM/RAM) to DSP (MOTOROLA)
82	PB5/D5	DSPHREQ	I	Error detection from DSP (MOTOROLA)
83	PB4/D4	NC	O	NC
84	PB3/D3	DSPSS	O	Slave selection to DSP (MOTOROLA)
85	PB2/D2	XDSPRST	O	RESET to DSP (MOTOROLA) MODULE
86	PB1/D1	DECMUTE	I	Detection of 1st DSP boot success from DSP MODULE
87	PB0/D0	XDSPMUTE	O	MUTE requeat to DSP MODULE
88	VSS3	VSS3	–	
89	VDD3	VDD3	–	
90	PC7/A7	PASSANDREW	O	Control for bypass Andrew circuit
91	PC6/A6	SYSPOW	O	Control power supply of system
92	PC5/A5	NC	O	NC
93	PC4/A4	XDVDRST	O	RESET to DVD MODULE
94	PC3/A3	XSYSMUTE	O	Control mute of system
95	PC2/A2	(VOLMUTE)	O	(Contorol mute of E-vol IC)
96	PC1/A1	VOLCLK	O	Clock for E-vol IC
97	PC0/A0	VOLDATA/CE	O	Data/CE for E-vol IC
98	PA0/CS2#	FLASHE/D	–	for FLASH writing
99	PA1/CS1#	FLASHDO	–	for FLASH writing
100	PA2/CS0#	FLASHCLK	–	for FLASH writing

- Port0 (P00-P07) can be selected for input or output by each 4 bits (P00-P03,P04-P07). Set for input when reset. And it can be set C-MOS or Nch-OD by each 1 bit in option.
- Port1 (P10-P17) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1bit in option.
- Port2 (P20-P27) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1 bit in option.
- Port3 (P30-P36) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1 bit in option.
- Port7 (P70-P73) can be selected for input or output by each 1 bit. Set for input when reset.
- Port8 (P80-P87) can be selected for input or output by each 1 bit. Set for input when reset.
- PortA (PA0-PA5) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1 bit in option.
- PortB (PB0-PB7) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1 bit in option.
- PortC (PC0-PC7) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1 bit in option.
- PortE and PortF can be selected for input or output by each 2 bits.

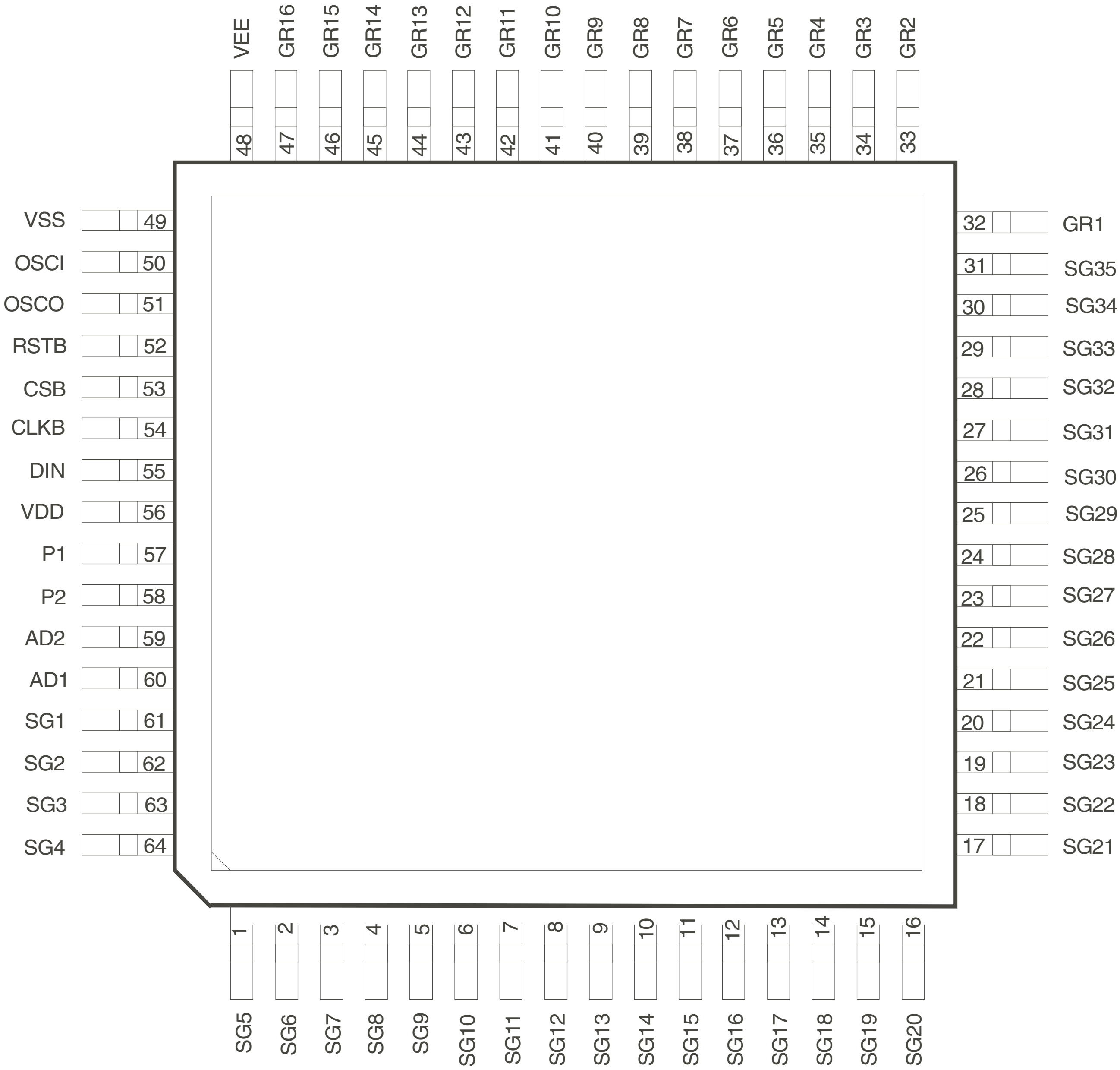
■ PT6302LQ-003 (DISPLAY ASSY : IC5601)

- FL Driver IC with character RAM

• BLOCK DIAGRAM


VDD
VSS
VEE
RSTB
DIN
CLKB
CSB
OSCO
OSCI
8-BIT SHIFT REGISTER
COMMAND DECODER
CONTROL CIRCUIT
TIMING GENERATOR 1
OSCILLATOR
TIMING GENERATOR 2
DCRAM 16 words x 8 bits
ADDRESS SELECTOR
WRITE ADDRESS COUNTER
READ ADDRESS COUNTER
DIGIT CONTROL
DUTY CONTROL
CGROM 248 words x 35 bits
CGRAM 8 words x 35 bits
ADRAM 16 words x 2 bits
SEGMENT DRIVER
AD DRIVER
PORT DRIVER
GRID DRIVER
SG1
SG35
AD1
AD2
P1
P2
GR1
GR16

- **PIN LAYOUT**


VEE
GR16
GR15
GR14
GR13
GR12
GR11
GR10
GR9
GR8
GR7
GR6
GR5
GR4
GR3
GR2
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
VSS
OSCI
OSCO
RSTB
CSB
CLKB
DIN
VDD
P1
P2
AD2
AD1
SG1
SG2
SG3
SG4
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
GR1
SG35
SG34
SG33
SG32
SG31
SG30
SG29
SG28
SG27
SG26
SG25
SG24
SG23
SG22
SG21
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
SG5
SG6
SG7
SG8
SG9
SG10
SG11
SG12
SG13
SG14
SG15
SG16
SG17
SG18
SG19
SG20

• PIN FUNCTION

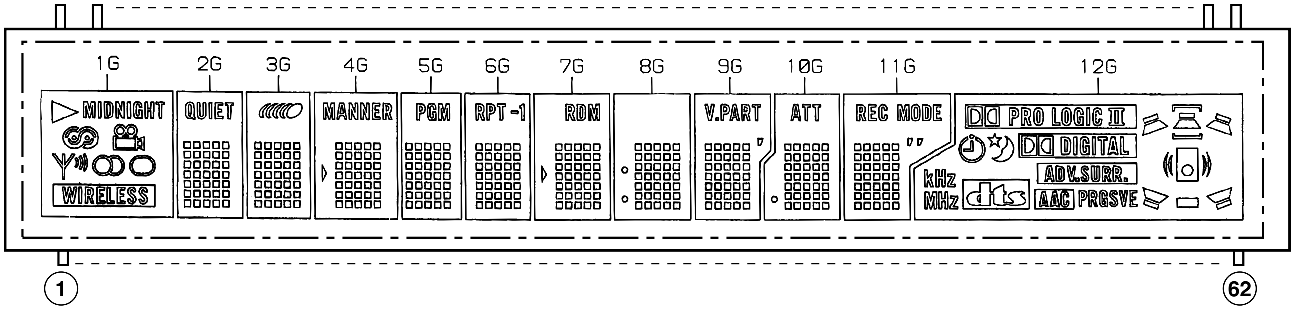
Pin Name	I/O	Description	Pin No. LQFP
SG5 to SG35 SG4 to SG1	O	Segment Driver Output Pin	1 ~ 31 64 ~ 61
GR1 to GR16	O	Grid Driver Output Pin	32 ~ 47
VEE	-	Power Supply	48
VSS	-	Ground Pin	49
OSCI	I	Oscillator Input Pin	50
OSCO	O	Oscillator Output Pin	51
RSTB	I	Reset Input Pin When this pin is set to "LOW", all functions are initialized.	52
CSB	I	Chip Select Input Pin When this pin is set to "High" Level, the serial data transfer is disabled.	53
CLKB	I	Shift Clock Input Pin The serial data is shifted at the rising edge of CLKB.	54
DIN	I	Serial Data Input Pin	55
VDD	-	Positive Power Supply	56
P1 to P2	O	General Purpose Output Pin	57 ~ 58
AD2 to AD1	O	Segment Driver Output Pin	59 ~ 60

7.2.2 DISPLAY

■ XAV3020 (DISPLAY ASSY :V5601)

• FL DISPLAY

● Pin Assignment



● Anode Connection

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
P1	MIDNIGHT	1−1	1−1	1−1	1−1	1−1	1−1	1−1	1−1	1−1	1−1	DD PRO LOGIC II
P2	▷	2−1	2−1	2−1	2−1	2−1	2−1	2−1	2−1	2−1	2−1	🕘
P3	◎	3−1	3−1	3−1	3−1	3−1	3−1	3−1	3−1	3−1	3−1	☽
P4	🎥	4−1	4−1	4−1	4−1	4−1	4−1	4−1	4−1	4−1	4−1	DD DIGITAL
P5	Y))	5−1	5−1	5−1	5−1	5−1	5−1	5−1	5−1	5−1	5−1	S5
P6	◯◯	1−2	1−2	1−2	1−2	1−2	1−2	1−2	1−2	1−2	1−2	S6
P7	◯	2−2	2−2	2−2	2−2	2−2	2−2	2−2	2−2	2−2	2−2	S7
P8	WIRELESS	3−2	3−2	3−2	3−2	3−2	3−2	3−2	3−2	3−2	3−2	S8
P9	−	4−2	4−2	4−2	4−2	4−2	4−2	4−2	4−2	4−2	4−2	S4
P10	−	5−2	5−2	5−2	5−2	5−2	5−2	5−2	5−2	5−2	5−2	S3
P11	−	1−3	1−3	1−3	1−3	1−3	1−3	1−3	1−3	1−3	1−3	S2
P12	−	2−3	2−3	2−3	2−3	2−3	2−3	2−3	2−3	2−3	2−3	S1
P13	−	3−3	3−3	3−3	3−3	3−3	3−3	3−3	3−3	3−3	3−3	dts
P14	−	4−3	4−3	4−3	4−3	4−3	4−3	4−3	4−3	4−3	4−3	ADV.SURR.
P15	−	5−3	5−3	5−3	5−3	5−3	5−3	5−3	5−3	5−3	5−3	AAC
P16	−	1−4	1−4	1−4	1−4	1−4	1−4	1−4	1−4	1−4	1−4	PRGSVE
P17	−	2−4	2−4	2−4	2−4	2−4	2−4	2−4	2−4	2−4	2−4	kHz
P18	−	3−4	3−4	3−4	3−4	3−4	3−4	3−4	3−4	3−4	3−4	MHz
P19	−	4−4	4−4	4−4	4−4	4−4	4−4	4−4	4−4	4−4	4−4	−
P20	−	5−4	5−4	5−4	5−4	5−4	5−4	5−4	5−4	5−4	5−4	−
P21	−	1−5	1−5	1−5	1−5	1−5	1−5	1−5	1−5	1−5	1−5	−
P22	−	2−5	2−5	2−5	2−5	2−5	2−5	2−5	2−5	2−5	2−5	−
P23	−	3−5	3−5	3−5	3−5	3−5	3−5	3−5	3−5	3−5	3−5	−
P24	−	4−5	4−5	4−5	4−5	4−5	4−5	4−5	4−5	4−5	4−5	−
P25	−	5−5	5−5	5−5	5−5	5−5	5−5	5−5	5−5	5−5	5−5	−
P26	−	1−6	1−6	1−6	1−6	1−6	1−6	1−6	1−6	1−6	1−6	−
P27	−	2−6	2−6	2−6	2−6	2−6	2−6	2−6	2−6	2−6	2−6	−
P28	−	3−6	3−6	3−6	3−6	3−6	3−6	3−6	3−6	3−6	3−6	−
P29	−	4−6	4−6	4−6	4−6	4−6	4−6	4−6	4−6	4−6	4−6	−
P30	−	5−6	5−6	5−6	5−6	5−6	5−6	5−6	5−6	5−6	5−6	−
P31	−	1−7	1−7	1−7	1−7	1−7	1−7	1−7	1−7	1−7	1−7	−
P32	−	2−7	2−7	2−7	2−7	2−7	2−7	2−7	2−7	2−7	2−7	−
P33	−	3−7	3−7	3−7	3−7	3−7	3−7	3−7	3−7	3−7	3−7	−
P34	−	4−7	4−7	4−7	4−7	4−7	4−7	4−7	4−7	4−7	4−7	−
P35	−	5−7	5−7	5−7	5−7	5−7	5−7	5−7	5−7	5−7	5−7	−
P36	−	QUIET	(((((	MANNER	PGM	RPT	RDM	col1	V.PART	ATT	REC MODE	−
P37	−	−	−	▷	−	−1	▷	col2	◸	col3	◸ ◸	−

● Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Connection	F1	NX	NP	NP	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	P35	P34	P33	P32	P31
Pin No.	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Connection	P30	P29	P28	P27	P26	P25	P24	P23	P22	P21	NX	NX	NX	NX	NX	P20	P19	P18	P17	P16	P15
Pin No.	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	
Connection	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	P37	P36	NP	NP	NX	F2	

Note

(1) F1, F2 : Filament
(2) NP : No pin
(3) NX : No extend pin
(4) DL : Datum Line
(5) 1G to 12G : Grid

7.3 DISC/CONTENT FORMAT

Disc / content format playback compatibility

This player is compatible with a wide range of disc types (media) and formats. Playable discs will generally feature one of the following logos on the disc and/or disc packaging. Note however that some disc types, such as recordable CD and DVD, may be in an unplayable format—see below for further compatibility information.

DVD-Video DVD-R DVD-RW

Audio CD Video CD CD-R CD-RW

Fujicolor CD

- KODAK Picture CD
- *is a trademark of Fuji Photo Film Co. Ltd.*

CD-R/RW compatibility

- This system will play CD-R and CD-RW discs recorded in CD Audio or Video CD format, or as a CD-ROM containing MP3, WMA or JPEG files. However, any other content may cause the disc not to play, or create noise/distortion in the output.
- This system cannot record CD-R or CD-RW discs.
- Unfinalized CD-R/RW discs recorded as CD Audio can be played, but the full Table of Contents (playing time, etc.) will not be displayed.

DVD-R/RW compatibility

- Compatible formats: DVD-Video, Video Recording (VR)*
  * *Edit points may not play exactly as edited; screen may go momentarily blank at edited points.*
- Unfinalized playback: No
- WMA/MP3/JPEG file playback on DVD-R/RW: No

PC-created disc compatibility

Discs recorded using a personal computer may not be playable in this unit due to the setting of the application software used to create the disc. In these particular instances, check with the software publisher for more detailed information.

Discs recorded in packet write mode (UDF format) are not compatible with this player.

Check the DVD-R/RW or CD-R/RW software disc boxes for additional compatibility information.

Compressed audio compatibility

- Compatible formats: MPEG-1 Audio Layer 3 (MP3), Windows Media Audio (WMA)
- Sampling rates: 32, 44.1 or 48kHz
- Bit-rates: Any (128Kbps or higher recommended)
- VBR (variable bit rate) MP3 playback: Yes
- VBR WMA playback: No
- WMA lossless encoding compatible: No
- DRM (Digital Rights Management) compatible: Yes (DRM-protected audio files will *not* play in this player). See also DRM in the *Glossary*on page 80.
- File extensions: .mp3 , .wma (these must be used for the player to recognize MP3 and WMA files – do not use for other file types)
- File structure: Up to 999 files per folder

About WMA

The Windows Media® logo printed on the box indicates that this player can playback Windows Media Audio content.

WMA is an acronym for Windows Media Audio and refers to an audio compression technology developed by Microsoft Corporation. WMA content can be encoded by using Windows Media® Player version 7, 7.1, Windows Media® Player for Windows® XP, or Windows Media® Player 9 Series.

Microsoft, Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

JPEG file compatibility

- Compatible formats: Baseline JPEG and EXIF 2.1* still image files up to 8 megapixels are supported (maximum resolution is 5120 x 5120 pixels).
  ** File format used by digital still cameras*
- File extensions: .jpg (must be used for the player to recognize JPEG files – do not use for other file types)
- File structure: Up to 999 files per folder

7.4 CLEANING

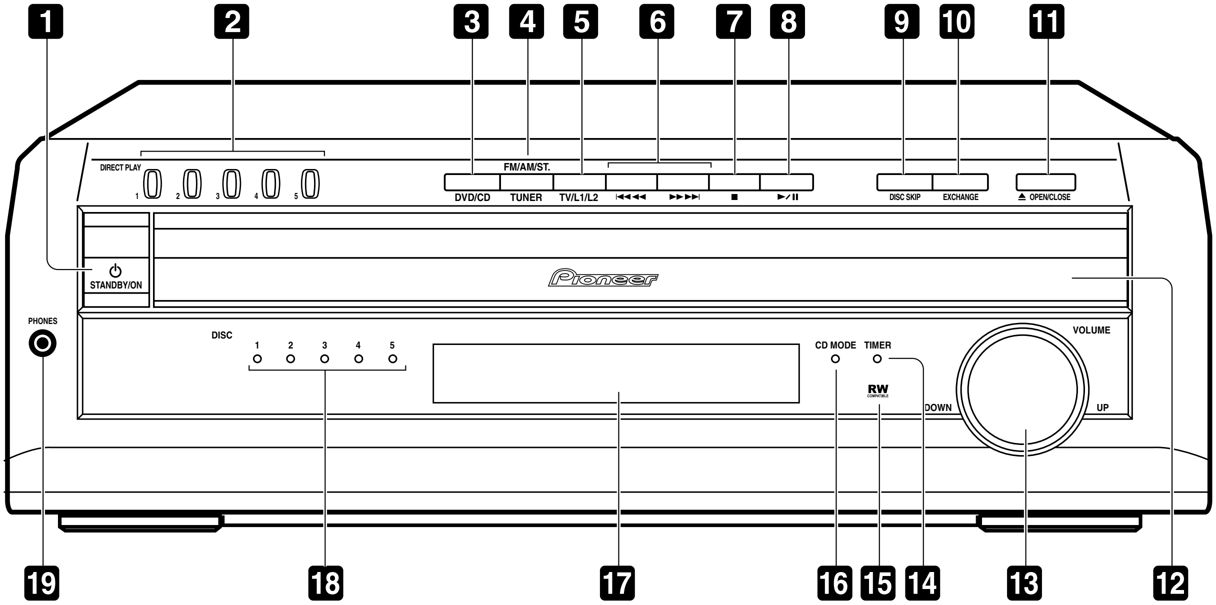
Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

8. PANEL FACILITIES

Front panel


1
2
3
4
5
6
7
8
9
10
11
DIRECT PLAY
1 2 3 4 5
FM/AM/ST.
DVD/CD
TUNER
TV/L1/L2
|◀◀◀◀
▶▶▶▶|
■
▶/II
DISC SKIP
EXCHANGE
▲ OPEN/CLOSE
STANDBY/ON
Pioneer
PHONES
DISC
1 2 3 4 5
CD MODE
TIMER
RW COMPATIBLE
VOLUME
DOWN
UP
19
18
17
16
15
14
13
12

1 ⏻ STANDBY/ON
Press to switch the system on or into standby.

2 DIRECT PLAY buttons
Press to start playback of any disc in the player.

3 DVD/CD
Press to switch to the **DVD/CD** function. Also starts/pauses/resumes playback of the currently loaded disc.

4 TUNER FM/AM/ST.
Press to switch to the tuner function, then between bands and station presets.

5 TV/L1/L2
Press to switch between the external sources, **TV**, **LINE 1** (**L1**) and **LINE 2** (**L2**).

6 |◀◀◀◀ and ▶▶▶▶|
Press to skip tracks/chapters; press and hold to scan backwards/forwards.

- When in listening to the tuner, use to tune to stations or select presets.

7 ■
Press to stop playback.

8 ▶/II
Press to start or resume playback. During playback, press to pause; press again to restart playback.

9 DISC SKIP

- During playback, press to start playing the next disc in the player.
- If the disc tray is open while no disc is playing, the tray rotates one disc space.
- If the disc tray was opened using the **EXCHANGE** button, then pressing **DISC SKIP** rotates the disc tray two disc spaces.

10 EXCHANGE
Press during playback to open the disc tray without stopping playback. Press again to close the disc tray.

11 ▲ OPEN/CLOSE
Press to open/close the disc tray.

12 Disc tray

13 VOLUME control
Use to adjust the volume.

14 Timer indicator
Lights when the timer is set.

15 RW COMPATIBLE
This mark indicates compatibility with DVD-RW discs recorded on a DVD recorder in Video Recording (VR) mode.

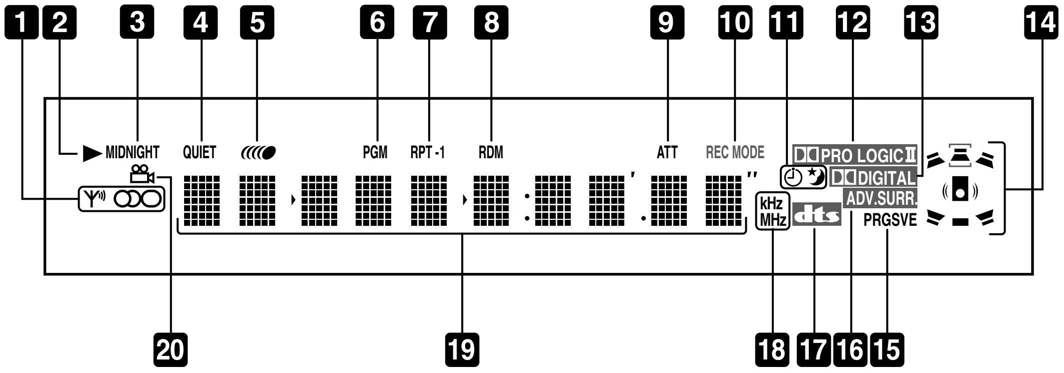
16 CD MODE indicator
Lights when the CD Mode is on. In this mode, the system only plays audio CDs and WMA/MP3 discs.

17 Display
See Display on page 21 for detailed information.

18 DISC indicators
Shows which disc spaces are currently occupied.

19 PHONES jack
Headphone jack.

Display



1 Tuner indicators

Y)))

Lights when a broadcast is being received.

◯◯

Lights when a stereo FM broadcast is being received in auto stereo mode.

◯

Lights when FM mono reception is selected.

2 ►
Lights when a disc is playing.

3 MIDNIGHT
Lights when the Midnight mode is selected.

4 QUIET
Lights when the Quiet mode is selected.

5 ((((●
Lights to indicate random or repeat play of all discs loaded.

6 PGM
Lights when a program list has been programmed.

7 RPT and RPT-1
RPT lights during repeat play. **RPT-1** lights during repeat one-track play.

8 RDM
Lights during random play.

9 ATT
Lights when the input attenuator is active for the currently selected analog input.

10 REC MODE
Lights when Rec Mode is on.

11 Timer indicators

◷

Lights when the timer is set

☾

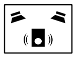
Lights when the sleep timer is active

12 DD PRO LOGIC II
Lights during Dolby Pro Logic II decoding.

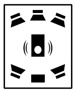
13 DD DIGITAL
Lights during playback of a Dolby Digital source.

14 Speaker indicators
These show which speakers are being used to output the current source (they are not placement diagrams). The illustrations below show some example displays.

5.1 channel surround sound


Stereo (2.1 channel) sound

3.1 channel sound with Dialogue enhancement on the center channel


5.1 channel surround sound with Virtual Surround Back mode active

(When headphones are connected, none of the speaker indicators are lit.)

15 PRGSVE
Lights when progressive scan video output is selected.

16 ADV.SURR.
Lights when one of the Advanced or Front Surround listening modes is selected.

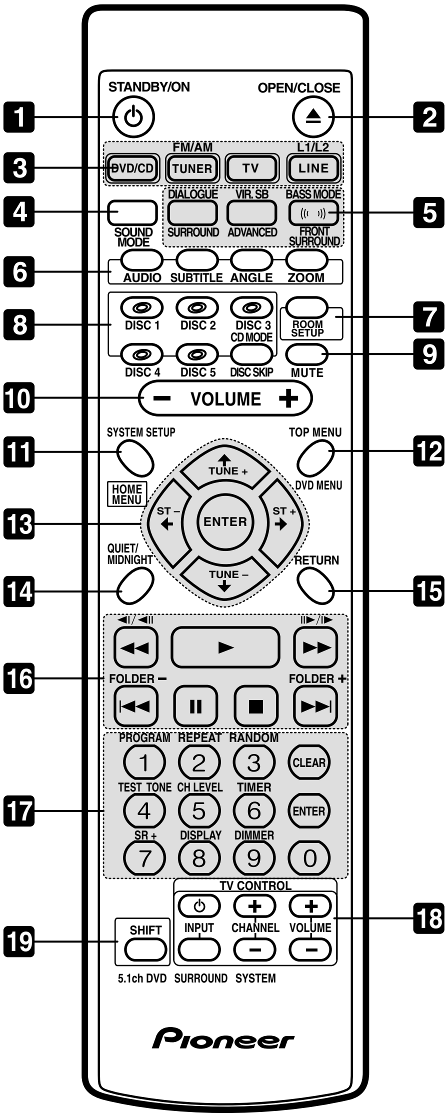
17 dts
Lights during playback of a DTS source.

18 kHz / MHz
Indicates the unit of the frequency shown in the character display (**kHz** for AM, **MHz** for FM)

19 Character display

20 🎥
Lights during multi-angle scenes on a DVD disc.

Remote control



STANDBY/ON
OPEN/CLOSE
1
2
FM/AM
L1/L2
DVD/CD
TUNER
TV
LINE
3
DIALOGUE
VIR. SB
BASS MODE
4
5
SOUND MODE
SURROUND
ADVANCED
FRONT SURROUND
6
AUDIO
SUBTITLE
ANGLE
ZOOM
7
8
DISC 1
DISC 2
DISC 3
CD MODE
ROOM SETUP
9
DISC 4
DISC 5
DISC SKIP
MUTE
10
VOLUME
SYSTEM SETUP
TOP MENU
11
12
TUNE +
HOME MENU
DVD MENU
13
ST –
ENTER
ST +
QUIET/ MIDNIGHT
RETURN
TUNE –
14
15
16
FOLDER –
FOLDER +
PROGRAM
REPEAT
RANDOM
1
2
3
CLEAR
TEST TONE
CH LEVEL
TIMER
17
4
5
6
ENTER
SR +
DISPLAY
DIMMER
7
8
9
0
TV CONTROL
18
19
SHIFT
INPUT
CHANNEL
VOLUME
5.1ch DVD
SURROUND
SYSTEM
Pioneer

Important

- Functions printed in green on the remote control are accessed using the **SHIFT** button. Press the function button you want while holding down **SHIFT**.

1 ⏻ STANDBY/ON
Press to switch the system on or into standby.

2 ⏏ OPEN/CLOSE
Press to open/close the disc tray.

3 Function select buttons
Press to select the source you want to listen to (**DVD/CD**, **TUNER**, **TV**, **LINE**).

4 SOUND MODE
Use to adjust the tone and effect levels/ Setting.

5 Surround sound and enhancement buttons

SURROUND
Use to select a Surround mode.

DIALOGUE (SHIFT + SURROUND)
Use to select a Dialogue mode.

ADVANCED
Use to select an Advanced Surround mode.

VIR. SB (SHIFT+ ADVANCED)
Press to switch the Virtual Surround Back speaker effect on/off.

FRONT SURROUND
Use to select a Front Surround listening mode.

BASS MODE(SHIFT+ FRONT SURROUND)
Use to select a Bass Mode.

6 DVD buttons

AUDIO
Press to select an audio channel or language.

SUBTITLE
Press to display/change the subtitle display.

ANGLE
Press to change camera angle during DVD multi-angle scene playback.

ZOOM
Press to change the screen zoom level.

7 ROOM SETUP

Press to start Room Setup.

8 Disc selection buttons

DISC select buttons

Use to select discs in the player.

DISC SKIP/ CD MODE

- During playback, press to start playing the next disc in the player.
- If the disc tray is open while no disc is playing, the tray rotates one disc space.
- If the disc tray was opened using the **EXCHANGE** button (front panel only), then pressing **DISC SKIP** rotates the disc tray two disc spaces.
- Use with **SHIFT** for **CD MODE** : Use to switch CD Mode on/off.

9 MUTE

Press to mute all sound from the speakers and headphones (press again to cancel).

10 VOLUME

Use to adjust the volume.

11 HOME MENU / SYSTEM SETUP

- Press to display (or exit) the on-screen menu for Initial Settings, Play Mode functions, etc.
- Use with **SHIFT** for **SYSTEM SETUP** : Use to make various system and surround sound Settings.

12 DVD MENU / TOP MENU

- Press to display a DVD-Video disc menu, or the Disc Navigator if a VR mode DVD-RW, CD, Video CD, WMA/MP3 or JPEG disc is loaded.
- Use with **SHIFT** for **TOP MENU**: Use to display the top menu of a DVD disc in the play position (this may be the same as pressing **DVD MENU**).

13 Cursor buttons, ENTER and tuning buttons

Cursor buttons

Use the cursor buttons (⬆/⬇/⬅/➡) to navigate on-screen displays and menus.

ENTER

Press to select an option or execute a command.

TUNE +/–

Use to tune the radio.

ST +/–

Use to select station presets when listening to the radio.

14 QUIET/MIDNIGHT

Use to select Quiet and Midnight listening modes.

15 RETURN

Press to return to a previous menu screen.

16 Playback controls

►

Press to start or resume playback.

◄◄ and ◄I/◄II

Use for reverse slow motion playback, frame reverse and reverse scanning.

►► and II►/I►

Use for forward slow motion playback, frame advance and forward scanning.

I◄◄ / FOLDER –

Press to jump to the beginning of the current chapter/track, then to previous chapters/tracks.

Press **SHIFT+ I◄◄** to jump to the beginning of the previous folder

►►I / FOLDER +

Press to jump to the next chapter/track (or folder by pressing **SHIFT+ ►►I**).

II

Press to pause playback; press again to restart.

■

Press to stop playback.

17 Number buttons and SHIFTfunctions

Use the number buttons for selecting chapters/tracks from a disc directly; use with the **SHIFT** button to access the functions printed in green.

PROGRAM (SHIFT+ 1)
Use to program/play a program list.

REPEAT (SHIFT+ 2)
Use to select a repeat play mode.

RANDOM (SHIFT+ 3)
Use to select a random play mode.

TEST TONE (SHIFT+ 4)
Use to output the test tone (for speaker setup).

CH LEVEL (SHIFT+ 5)
Use to adjust the speaker level.

TIMER (SHIFT+ 6)
Press to display the clock and to access the timer menu.

SR+ (SHIFT+ 7)
Press to switch SR+ on or off.

DISPLAY (SHIFT+ 8)
Press to display/change disc information shown on-screen.

DIMMER (SHIFT+ 9)
Press to switch between normal and dimmed front panel display.

CLEAR
Press to clear an entry.

ENTER
Press to select menu options, etc. (works exactly the same as the **ENTER** button in **13** above).

18 TV CONTROL buttons

These buttons are dedicated to control the TV assigned to the **TV** button.

⏻
Use to turn on/off the power of the TV.

INPUT
Use to select the TV function.

TV CHANNEL +/–
Use to select channels.

TV VOLUME +/–
Use to adjust the volume on your TV.

19 SHIFT

Use to access the functions/commands printed in green on the remote (press the button for the function you want while holding down **SHIFT**).

■ Jigs list

Name	Jig No.	Remarks
Service Remote Control Unit	GGF1381	adjustment, diagnosis
DVD Test Disc (DVD-Video)	GGV1025	Check of DVD-Video
Flexible Cable (18P)	GGD1160	diagnosis of DVDM ASSY
Flexible Cable (30P)	GGD1228	diagnosis of DVDM ASSY
Flexible Cable (23P) (×2)	GGD1315	diagnosis of 6ch AMP ASSY
DVD Data Disc	GGV1133 (*)	diagnosis (ID data setting)
DVD Data Disc	GGV1174 (*)	diagnosis (ID data setting)

(*) : GGV1133 is now released, however GGV1174 will be released in MAY/2004.
Until GGV1174 is released, use GGV1133 data disc.